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If teachers matter to the academic success of students, then having experienced teachers shows significant promise in eliminating persistent achievement gaps. However, high rates of teacher attrition are persistent in schools serving low-income and minority students serving to reinforce these persistent gaps. The purpose of this study is to allow the voices of science teachers working in low-performing, rural schools to be heard and expand our current understanding of teacher retention beyond “yes” or “no” decisions. The narratives teachers share demonstrate that persistence is constructed daily through frustrations and hard-won victories that are significant to one’s career decisions. With an ear for the structures that guide teacher’s practice and create professional tension, teacher narratives also represent hope for the subtle and splendid ways they challenge these tensions to carve out their existence as educators. Their stories are inspirational to future teachers and teacher educators because they provide insights to the ways teachers learn to persist.

My research was guided by three general interests: What experiences bring individuals to teach science in hard to staff schools, what conditions did teachers find when they arrived, and how do science teachers respond to the circumstances in which they find themselves teaching. Steered by Holland, Lachicotte, Skinner, and Cain’s (1998) theoretical framework of Figured Worlds, and inspired by previous work utilizing this framework, I gathered data through extended interviews with nine participants and examined their stories through qualitative narrative analysis to illustrate the delicate

interplay between structure and agency and how this interplay is intertwined with teachers' willingness to persist. This study revealed that individual willingness to persist was interwoven with their ability to author themselves within and/or against existing cultural models of the "good teacher" and its implications lead to a more sophisticated understanding of working conditions by illuminating how cultural models of "good teacher" are (re)produced in hard-to-staff schools. Additionally, the results demonstrate opportunities, beyond attrition, individuals leverage to align themselves with or contest cultural models to encourage their willingness to persist.

STORIES FROM THE FIELD: TEACHING SCIENCE IN
LOW-PERFORMING, RURAL SCHOOLS

by

Patrick John Conetta

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Approved by

Heidi B. Carlone
Committee Chair

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To my teachers who inspired and taught.

To my parents who encouraged.

To my students, colleagues, and administrators who shaped me as an educator.

To brave teachers who openly shared their stories and shared their lives.

To my wife and children who always believed in me even when I had doubts.

APPROVAL PAGE

This dissertation, written by Patrick John Conetta, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair Heidi B. Carlone

Committee Members Jewell Cooper

Kathy Matthews

Sam Miller

March 18, 2015
Date of Acceptance by Committee

March 18, 2015
Date of Final Oral Examination

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CHAPTER I

INTRODUCTION

Overview

The No Child left Behind Act of 2001 along with the more recent Race to the Top competition of 2010 have increased attention paid to teacher effectiveness, especially in low-performing schools. Inspired by convincing findings identifying teachers as the most influential school-level factor in students' achievement, school districts and state leaders sought to recruit and hire only highly qualified teachers while retaining only the most effective teachers. However, school leaders soon found that simply recruiting highly qualified teachers was no guarantee that most effective teachers would remain.

National estimates of new teacher attrition approximate between 40–50% of teachers leave the profession within the first five years (Ingersoll & Smith, 2003; Murnane, Singer, Willett, Kemple, & Olsen, 1991) and according to the National Center for Education Statistics (NCES, 2007), nearly 25% of newly hired public school teachers leave their profession within the first three years. However, low-income schools in rural and urban communities turn over, on average, one-fifth of their teaching force annually (Ingersoll, 2001). Patterns of teacher migration from schools serving the most socioeconomically disadvantaged and racially diverse populations of students to whiter and more advantaged schools is described by Ingersoll as a “revolving door” (Ingersoll,

2001, p. 499) and results in an inequitable distribution of qualified and experienced teachers.

When experienced teachers elect to leave they are often replaced by less experienced and consequently, less effective, first year teachers (Clotfelter, Ladd, & Vigdor, 2008; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004) and the rate at which teachers leave disadvantaged schools severely limits the instructional capacity of the staff to implement and sustain school-wide instructional programs. Further, Ingersoll (2002) concludes that “not only are there more beginners in disadvantaged schools, but beginners in those schools are less likely to be fully qualified” (p. 16); or “are far more likely to be misassigned” (p. 17), which “significantly correlate with decreases in teachers’ morale, engagement, and commitment” (Ingersoll & Smith, 2003, p. 162), thus perpetuating the movement of teachers away from particular types of schools.

Driven by a need to better understand the conditions that contribute to teacher attrition, several lines of research quantitatively examined school level factors and teacher characteristics that correlate to teacher migration. For example, teacher attrition has been correlated to school level conditions such as student socioeconomic status and demographics (Borman & Dowling, 2008; Borman & Kimball, 2005; Ferguson, 1998; Guarino, Santibañez, & Daley, 2006; Hanushek, Kain, & Rivkin, 2004; Ingersoll, 2002; Kain & Singleton, 1996); as well as working conditions, which include facilities, administrative support, discipline, and induction (Ingersoll, 2001; Ladd, 2009, 2011; Smith & Ingersoll, 2004).

It has been shown that schools serving socioeconomically disadvantaged students in urban and rural locations suffer from high rates of teacher turnover. These rates of attrition hinder the development of robust school-wide instructional and support programs, which also correlates with high rates of teacher attrition. This chicken-and-egg conundrum begs the question of whether teachers leave schools because of the population of students they serve or they leave because of the lack of support and regularities of practice they feel are needed to achieve the career aspirations to disrupt the historical patterns of student achievement found in hard-to-staff schools.

Teacher attrition has been correlated with individual teacher characteristics such as gender, ethnicity, and age/experience (Guarino et al., 2006; Hanushek et al., 2004; Johnson, Berg, & Donaldson, 2005); however, while the predictive statistical modeling resulting from such quantitative studies has produced a better understanding of the factors that contribute to teacher attrition, the causes remain less clear.

For example, despite findings from quantitative studies that predict turnover rates, the results of such studies have been mixed. Studies have identified some conditions correlate to teacher retention with statistical significance, while others do not. Such mixed results have spurred additional research that combines factors known to contribute to teacher attrition. For instance, poor working conditions are commonly found in schools attended by minority and low-income students (Borman & Dowling, 2008; Boyd et al., 2011; Ladd, 2009, 2011; Loeb, Darling-Hammond, & Luczak, 2005). However, Johnson, Kraft, and Papay (2011) conclude, “measures of school environment explain away much of the apparent relationship between teacher satisfaction and student

demographic characteristics” (p. 4). Thereby suggesting, teachers respond more strongly to poor working conditions as opposed to student demographic characteristics to explain reasons for their departure (Johnson et al., 2005, 2011).

Previous studies of teacher retention have provided useful information to identify and better understand the characteristics that contribute to high rates of teacher attrition, but are limited in fully explaining how teachers make meaning of the institutional conditions that contribute to attrition. Neither student demographic characteristics nor working conditions produced by school contexts, adequately explain how teachers experience their external conditions or how they act to influence their external environment and their place in it. Consequently, little is known about how teachers’ working conditions are produced or how they shape the professional fate of teachers. For instance Sloan (2006) concludes, teachers do not experience or respond to school-related policies in “predictable, mechanistic, or unidimensional ways” (p. 145); rather, “teachers . . . interpret and respond to institutional structures differently based, in part, on their past experiences, personal histories, and frames of reference” (p. 146), thus suggesting a need to better understand the ways in which individuals are presented with and make meaning of school-level structures and how these structures influence their career decisions.

Statement of the Problem

Why is it that some teachers persist while others leave after their first, third, or fifth year? How do some teachers persist in challenging placements while others decide to leave their schools or the profession entirely? Past research in teacher retention has sought to answer these questions by examining large, nationally representative data sets

leading to conclusions about school-level variables that contribute to teacher attrition or the dispositions of teachers who do persist. However, previous studies of teacher persistence have failed to recognize the persistence as an outcome of one's experience and the meanings they make of the school level conditions they navigate daily.

Large-scale quantitative studies support the conclusion that teachers choose to leave schools with poor work environments that are most common in schools that minority and low-income students attend (Borman & Dowling, 2008; Boyd et al., 2011; Ingersoll, 2001; Ladd, 2009, 2011; Loeb et al., 2005). These studies have added to our understanding of teacher attrition by prioritizing school level conditions and individual teacher characteristics known to contribute to teacher attrition. However, very little qualitative data exists from teachers working in hard-to-staff schools from which deconstruction and analysis of their storied lives can shed important findings around this problem.

What is it about hard-to-staff schools that is so off-putting that teachers they to leave shortly after joining the staff? To address this question I have conceptualized persistence as a process or an ongoing accomplishment that is produced by and intertwined with one's working conditions, experience, attitudes, beliefs and history. Previous studies of teacher retention drawing largely from survey data overlook retention or attrition as a process rather than an outcome.

Statement of the Purpose

Previous studies of teacher retention have honed in on working conditions. Teacher working conditions are influenced not only by the physical features of the work

place, but also the organizational, sociological, political, psychological, and educational structures of the work environment (Johnson & The Project on the Next Generation of Teachers, 2004; Johnson et al., 2005) and produce “instructional cultures embodied by the professional communities that new teachers encounter in their schools and districts [which] exert a profound influence on their professional beliefs and practices” (Achinstein, Ogawa, & Spielman, 2004, p. 562). However, previous research on teacher retention, has failed to examine how career decisions are constructed in response to instructional or institutional cultures. Giroux’s (1983) attention to the significance of power, resistance, and human agency are useful in understanding how teacher’s career decisions are guided by specific institutional conditions and their ongoing decisions. Yet, the construction of this structure/agency dialectic remains absent as a theoretical construct utilized to examine teacher retention.

Similarly, individual agency has been overlooked by previous research on teacher retention. Goodson (1981) argued that researchers have not confronted the complexity of the schoolteacher as an active agent in making his/her own history; many of them still treated teachers as interchangeable types unchanged by circumstance or time. He wrote “in understanding something so intensely personal as teaching it is critical that we know about the person the teacher is” (Goodson, 1981, p. 69). Gilbert and Yerrick (2001) also acknowledge the importance of the individual in producing and reproducing institutional characteristics by writing, “it is becoming more clear that . . . teachers are not passive observers of the socialization processes taking place in schools; rather, they help determine the nature and extent of the socialization” (p. 575). Researchers like Watson

(2008) influenced by post-structural, social constructivist worldview have called attention “the ways that workers . . . are far from passive in the face of discursive pressures” (p. 125). Rather he states,

individuals work ‘with the grain’ of existing dominant discourses and subjectivities, [and] as they do this, they can exploit the variety of sometimes overlapping, sometimes conflicting, discourses and subjectivities in order to craft a self which is, to an extent, ‘their own.’ (p. 125)

Teachers’ career decisions warrant theoretically grounded exploration using qualitative methods that purposefully seek to explore the experiences of certain subpopulations of teachers (Brookhart & Freeman, 1992). The purpose of this study was to specifically address this gap by examining (a) the histories that influence individuals’ decisions to work in hard-to-staff schools, (b) the realities science teachers face in hard-to-staff schools, and (c) how their responses impact their day-to-day willingness to persist.

Consequently, this study will add texture and context to our existing understanding of teacher persistence by privileging the stories and personal experiences of science teachers in low-performing, rural schools whose hard won victories occur daily and in often mundane ways. Previous research on teacher retention has examined teacher retention in a timescale of years. However, my six years of experience as an instructional coach working with science teachers in low-performing schools (a distinct type of hard-to-staff school), suggests that persistence or attrition is produced daily through previously taken for granted experiences. In my work as an instructional coach I am left to reconcile existing literature on teacher retention with practical experience

informed by a myriad of personal stories shared by practicing teachers working in hard-to-staff schools. Embedded within these conversations I have found that teachers acquire more control over their work environment than previous research gives credit.

Consequently, it is time to allow teachers in hard-to-staff schools to speak for themselves regarding their experiences that shape their career decisions and affect their abilities to persist amidst difficult working conditions.

Importance of the Study

Teachers' voices are long overdue in studies of teacher retention and show substantial promise to teacher educators who work to prepare new teachers who will likely occupy positions in hard-to-staff schools. This study is important because it allows teachers working in low-performing, rural schools to speak about their experiences, realities, hard-won victories and enduring struggles. By design, this study captures the voices of teachers working in an era of high stakes testing and unprecedented teacher accountability to inform teacher educators of the conditions early career teachers face and how these circumstances influence one's teaching identity and willingness to persist.

Previously, teacher retention has been conceptualized as a yes/no outcome ostensibly ignoring persistence as a process. Conceptualizing persistence as an ongoing, hard-won accomplishment constructed through daily interactions, accumulation of resources, and personal decisions builds upon existing knowledge of the ways "lack of support" or "lack of autonomy" contributes to teacher attrition.

Research Questions

Informing this study of science teacher persistence in low-performing, rural schools are the research questions that follow:

1. What are the stories teachers tell about their decisions to teach in low-performing, rural schools?
2. How do science teachers in low-performing, rural schools story their realities and how do these realities influence their teaching?
 - a. What subject positions are made available?
 - b. What actors are significant?
 - c. What artifacts and discourses mediate teacher's stories?
3. In what ways do science teachers author themselves within and against the realities they describe as significant?
 - a. What do teachers' stories tell us about their willingness to persist?

CHAPTER II

LITERATURE REVIEW

Overview

Research has demonstrated that experienced teachers are generally better teachers (Clotfelter et al., 2008; Rivkin et al., 2005); however, schools continue to face the challenge of recruiting and retaining qualified teachers. While total estimates of new teacher attrition approximate 40%–50% in the first five years (Ingersoll & Smith, 2003; Murnane et al., 1991), the combined loss of inexperienced teachers to migration and attrition, and veteran teachers to retirement, place the annual teacher turnover rate at 13–15% (Ingersoll, 2001). Moreover, early career teachers were found to steadily migrate out of high minority, high poverty schools and into whiter, higher income schools—an unfortunate truth observed many times over (see Carroll, Reichard, & Guarino, 2000; Darling-Hammond, 2002a). Furthermore, schools serving a disproportionate number of minority and low-income students employed teachers with lower qualifications than schools with fewer minority children (Johnson et al., 2011), thereby multiplying the overall negative impact on student achievement.

Teachers' decision to stay in the profession or in a particular school is dependent on a myriad of factors which ultimately rests within an equation that compares the benefits of one's current placement to the benefits that might be achieved in another placement, or occupation, altogether. According to Ingersoll (2001), "the rate of turnover

for teachers appears to be higher than in many other occupations” (p. 513) and their decision to stay, migrate, or leave have been correlated to a variety of characteristics that can be measured statistically. And although Harris and Adams (2007) recently disputed this generalized observation of Ingersoll, they acknowledge that teacher turnover impacts *some* schools and *some* subject areas to the magnitude Ingersoll (2001) claims. While it is virtually impossible to predict all of the characteristics that influence teacher retention, substantial effort directed toward the issue of teacher recruitment and retention has followed the release of the National Commission on Excellence in Education’s (1983) publication of *A Nation at Risk* (1983).

Since the National Commission on Excellence in Education’s report was released, several researchers tried to make sense of the issue of teacher recruitment and retention. In his seminal paper, Ingersoll (2001) utilized nationally representative data available from the Schools and Staffing Survey (SASS) and Teacher Follow-up Survey (TFS) to conclude:

Staffing problems are not primarily due to . . . an insufficient supply of qualified teachers . . . Rather, the data indicate that school staffing problems are primarily due to excess demand resulting from a ‘revolving door’—where large numbers of qualified teachers depart their jobs for reasons other than retirement. (p. 499)

Furthermore, Ingersoll (2004) followed his groundbreaking work by directing his attention to disadvantaged schools in particular. In it, he applied supply and demand theory to construct an analogy of disadvantaged schools, comparing them to a “bucket rapidly losing water because of holes in the bottom” (p. 12). Efforts to recruit more teachers, even if that involves lowering licensure requirements, increasing education

program acceptance rates, or creating alternative pathways to licensure, will do little to fill the bucket if the holes are not patched first.

An ongoing debate exists in explaining the transfer and exit patterns that create hard-to-staff schools. Some contend that teachers display discontent with their low-income minority students (Borman & Dowling, 2008) suggesting that student demographics are deciding factors in the career decisions of teachers (Hanushek et al., 2004). Others contend that teachers leaving high-minority, low-income schools actually reject the dysfunctional contexts in which they work (Allensworth, Ponisciak, & Mazzeo, 2009). Studies such as these and others mentioned in this review overemphasize the use of large data sets gathered through national or state level surveys, and therefore fail to address the hidden and situated meanings teachers construct as they work in hard-to-staff schools.

What follows is a review of the teacher retention literature describing characteristics that explain the variance in teacher attrition across various states, districts, and schools. The intent of the literature review is to provide the reader with a summary of the claims made by teacher retention literature, provide a context for this present study, and suggest motivations behind additional exploration into teacher retention in schools labeled hard-to-staff. As the reader will see, the literature suggests some of the variables that contribute to teacher attrition; however, many are subject to ongoing exploration and remain subject of considerable debate.

Teacher Characteristics

Age/Experience

There is much agreement that younger, less experienced teachers leave the profession at higher rates than veteran teachers. However, the rate of attrition slowly decreases as age and experience accumulate. The resultant plot of attrition/movers vs. age/experience is a well-documented U-shaped curve (Guarino et al., 2006; Hanushek et al., 2004; Ingersoll, 2001).

Analyzing data from 300,000 teachers in Texas, Hanushek et al. (2004) found that teachers leaving Texas public schools were generally in their first two years of teaching or among teachers nearing retirement. Kirby, Berends, and Naftel (1999) utilized longitudinal teacher data in Texas from 1979 to 1996 to report that 16% of teachers in Texas who entered teaching between 1987 and 1996 left after the first year, and 26% left after their second year. Ingersoll (2001) analyzed teacher turnover as a function of both mobility and attrition among 6,000 teachers participating in the SASS/TFS from 1980 to 1995 to conclude that early career teachers as well as those teachers nearing retirement are more likely to contribute to turnover statistics. There seems to be little argument that teacher turnover is concentrated at the onset of one's teaching career and at the end.

The apparent connection between teacher's age and attrition has sparked recent debate about the importance of age or years of experience to explain the trends in teacher attrition. Grissmer and Kirby (1987) applied the theory of human capital to help disentangle the connection between age, experience and teacher attrition. This theory posits that as an individual stays in a profession, location, or firm (school district), they

will accumulate human capital, which will in turn decrease the probability of attrition. Consequently, years of experience, rather than age, might be better predictors of teacher retention. Particularly enigmatic is an understanding of what is considered capital among science teachers and how it is accumulated.

In an effort to generate a better understanding of how age and experience contribute to teacher retention, Johnson and Birkeland (2003) performed interviews of 50 first and second year teachers who reported reasons for staying, moving, or leaving the profession altogether. Among their 50 initial participants, 13 left their initial placement (movers and leavers) after the first year and only 28 remained in their initial placement after the second year. In total, 10 of the initial participants remained in teaching during their third year. The authors noted differences in the perceived experiences, as opposed to age and experience of the participants, as significant factors in their decision to stay, leave, or move. Therefore, based upon this study, experience seems to be a better predictor of teacher retention than absolute age, yet the matter is still subject for debate.

Gender

It comes as little surprise that women make up the majority of the teacher workforce. Consequently, evidence from quantitative analysis suggests that gender is a factor that contributes to teacher retention. For instance, Ingersoll and Alsalam (1997) found that women reported a higher level of commitment to teaching. However, studies included in this review indicate that men are actually more likely to remain in teaching once they enter the profession (Guarino et al., 2006; Johnson & Birkeland, 2003; Murnane & Olsen, 1989). Borman and Dowling's (2008) study confirmed this

conclusion by conducting a meta-analytic and narrative analysis of teacher attrition research. The authors found gender to be a moderating variable in predicting the probability of teacher attrition citing 17 empirically-based publications that examined gender as a factor contributing to attrition. Similarly, Henke, Chen, Geis, and Knepper (2000), citing the Baccalaureate and Beyond Longitudinal Study data, found that “women and whites continue to enter teaching more frequently, [yet] the unique effects of gender and the measures of achievement were not undertaken by their study” (p. 61). Given the disproportionate number of males in the workforce and additional mitigating factors that contribute to teacher persistence, it is difficult to say conclusively whether gender contributes to the likelihood of teacher retention. Additionally, quantitative data gleaned from surveys may fail to capture how gender discrepancies related to teacher retention are produced.

Race/Ethnicity

A teacher’s race and ethnicity have been found to be factors contributing to teacher retention. And although it has been well documented that teachers tend to migrate toward schools that match their own ethnicity (Haberman, 1996; Ladson-Billings, 1995), little attention has been paid to teachers who are placed into, or seek out, schools where student populations do not match their own ethnicity/race.

Ingersoll (2001) concluded that minority teachers were *less likely* to leave teaching than teachers who didn’t belong to a minority subgroup. Similarly, Kirby, Grissmer, and Hudson (1991) and Kukla-Acevedo (2009) found that higher retention rates exist among minority teachers, and Borman and Dowling (2008) found that White

teachers were 1.36 times more likely to leave than non-White teachers while Kirby et al. (1999) found that early attrition rates among Hispanic teachers were the lowest of the subgroups identified. Additionally, Kirby et al. (1999) found variance in the teaching terms among the subgroups (Black males teachers – 6 years, and Black females – 9 years, Hispanic females and males – 10 years, White females – 6 years, and White males – 7 years). Conversely, Ingersoll and May (2011) concluded that teachers of color suffered from greater job dissatisfaction and higher turnover than did White teachers. Further, Henke et al. (2000) found no statistical significance in the rate of teacher retention and measures of race and ethnicity. Although the results do not paint a clear picture of the ways gender and race contribute to teacher persistence, it is worth noting that the conflicting conclusions of such studies could be attributed to the fact that the researchers varied in their conceptualizations of migration and attrition limiting an ability to compare studies due to varied treatment of dependent variables.

Grade Level/Content Area

Generally there is agreement that elementary teachers are more likely to remain teaching than secondary teachers (Guarino et al., 2006; Ingersoll, 2006; Kukla-Acevedo, 2009; Murnane & Olsen, 1989) and non-science teachers are less likely to attrite than science teachers (Kirby et al., 1999; Murnane et al., 1991). For example, Ingersoll (2001, 2006) found that mathematics and science teachers were more likely to leave than teachers of other subjects. Henke, Zahn, and Carroll (2001) noted an attrition rate of 30% for first-year teachers who had majored in engineering, mathematics or natural sciences as compared to an attrition rate of 14% for those coded as general education majors.

While implications could extend to the grade level placement of these graduates respectively, I simply use the conclusions to document differences in subject area placement.

Examination of teacher retention by grade level is especially problematic. For example, when comparing attrition rates among secondary and elementary teachers, it is important to acknowledge that secondary teachers generally declare a major *in* a subject other than education while elementary teachers declare majors *as* education. Therefore, secondary teachers tend to avoid detection in studies of pre-service teachers entering the profession while elementary are overestimated in studies of retention by grade level. Therefore caution should be exercised when interpreting these published results.

Given the problematic nature of interpreting attrition rates as a function of content area, Ingersoll and Perda (2009) re-defined qualified content area teachers as those in possession of a graduate or undergraduate degree in science, mathematics or, a related field as opposed to relying on self-reports of their teaching assignment. The authors noted that in previous studies describing teacher retention, teachers coded themselves as science teachers despite concentrations in other areas when they were assigned to teach science. However, it has been shown that teachers, especially those teaching in hard-to-staff schools are often assigned to teach in content areas outside their area of expertise (Ingersoll, 1999). Thus, Ingersoll and Perda (2009) eliminated this potential shortcoming by analyzing participant self-reports of graduate or undergraduate degrees in specific content areas to study retention rates over time.

Utilizing SASS and TFS data from 1999-2000 along with accurate coding of teacher's degree, the authors concluded that attrition rates between science and mathematics teachers were not significantly different than teachers from other fields. However, consistent with previous findings, Ingersoll and Perda (2009) noted that "teacher turnover is not evenly distributed . . . and there are large variations in turnover" (p. 36) attributed to school-to-school differences and deserve further exploration.

Examining the 2003-04 SASS data, Ingersoll and May (2010) observed that 49,600 mathematics and science teachers were newly hired at the beginning of 2003. Mathematics and science teacher migration/attrition revealed that 51,400 mathematics and science teachers left before the following year, resulting in over 100,000 job transitions, which comprise more than a quarter of the mathematics/science public school teaching force. Longitudinal data from the SASS from the late 1980s to 2004 reveal an increase in the turnover rate of mathematics and science teachers of 33% and 11% respectively, yet these migration rates are not consistently different than migration rates seen in teachers of other content areas during the same period of time. Therefore, Ingersoll and May (2010) conclude that although retention rates of mathematics and science teachers fluctuate up and down, the differences between retention rates of mathematics/science teachers is similar to the retention rates of those teaching subjects other than science/math. However, a narrow focus on turnover rates "masks an important part of the story—math and science teacher turnover is not equally distributed" (p. 42)—thereby supporting the notion some schools, some grade levels and some content areas experience markedly different retention rates than those previously described by larger

national samples. Not only does large scale quantitative methodology mask the individual differences experienced in particular schools, grade levels, and content area, it also overlooks the day-to-day and moment to moment decisions teachers construct to persist, migrate or leave the profession altogether.

In sum, there seems to be growing agreement that differences in retention rates affect schools differently; however, there is general disagreement about whether grade level or content certification contribute to significant differences in teacher retention, which are in part, due to differing methodologies and definitions of attrition, migration and persistence. In the next section I will explore existing research that implicates teacher ability as a factor that contributes to teacher retention.

Academic Ability

According to a review of teacher retention literature, the “preponderance of evidence suggests that teachers with higher measured ability have a higher probability of leaving [in addition] retention rates var[y] by level of education and field” (Guarino et al., 2006, p. 186). For instance, Podgursky, Monroe, and Watson (2004) noted that teachers with higher ACT scores were not only less likely to enter teaching, but also less likely to remain in teaching. While Henke et al. (2000) found that individuals with college exam entrance scores in the top quartile were twice as likely to leave teaching within the first five years as those in the bottom quartile. However, Zumwalt and Craig (2005) cautioned the validity of using of high school data to predict entry into teaching fields as many states require prospective teachers to declare a major other than education to complete their licensure thereby clouding the picture of who plans to enter teaching. In an effort to

mitigate this shortcoming, analysis of teachers' scores on the National Teacher Exam (NTE), Murnane and Olsen (1989) found that teachers with higher NTE scores were more likely to leave the profession even after many years of teaching experience.

In addition to using standardized measures of academic performance to predict teacher retention rates, graduate and post-graduate degrees have been shown to correlate with teacher retention rates. Specifically, Borman and Dowling (2008) conclude that teachers with graduate degrees were more likely to leave teaching than those with undergraduate degrees. Additionally, Kirby et al. (1999) found that teachers holding advanced degrees at entry were more likely to leave than teachers entering with a bachelor's degree. Further, Ingersoll and Alsalam (1997) reported on teachers' sense of commitment in their analysis of 1990-1991 SASS data and found that those teachers holding graduate degrees had a decreased sense of commitment upon entering teaching. However, Adams (1996) concluded that elementary teachers in a large school district in Texas holding advanced degrees were 68% more likely to leave than teachers holding bachelor's degrees. Finally, two studies concluded there was no significant correlation between teachers' achievement indicators and teacher retention (see Latham & Vogt, 2007; Perrachione, Rosser, & Petersen, 2008). Once again, it is difficult to conclusively determine the direction or magnitude in which advanced degrees impact teachers' likelihood to remain in the classroom and it remains obscure how advanced degrees impact the meanings they made in their teaching placement suggesting teacher retention be explored as an outcome of meaning making rather than an event.

Hughes (2012) sought out to examine how teacher characteristics of experience, gender, educational level, ethnicity, grade level, and subject or content area relate collectively, or separately, with teacher retention. Using a self-made survey consisting of 60 items, which included two open-response items, Hughes initially sent requests for participants to building-level leaders (principals) in stratified sample of schools in Arkansas. Initially, only 45 of the 200 schools included on the first sample responded positively, agreeing to distribute surveys to their teaching faculty. Therefore, another stratified sample of 200 schools was generated and invitations to participate were subsequently sent again to building-level administrators. In total 70 principals responded positively and agreed to send invitations to potential participants. From the 70 schools responding positively, 1,149 surveys were partially completed, leaving 789 completed surveys to be used in the analysis. The authors note several limitations in their data. First, an inability to calculate the response rate because staff size at each participating schools was incomplete; and second, despite stratified sampling, the participants in the study overrepresented teachers in large schools as well as teachers in more affluent schools, thus representing a major point of contention for this present study; that the opinions, experiences and conditions that contribute to teacher retention overemphasize teachers in affluent school's experiences and muting the voices of teachers in less-affluent schools.

However, despite shortcomings created by sampling bias, Hughes (2012) found that years of teaching experience, degree, and grade level were statistically reliable in

predicting teacher retention. On the other hand, the homogenous sample of more than 86% female participants made predicting retention by gender unreliable.

Measurements of teachers' ability are problematic, due in part, to how "ability" is conceptualized—as a fixed characteristic set in place at a particular period of time—when ability is measured, and how it is used to predict teacher retention. However, I include teacher ability and its apparent connection to teacher retention here to give the reader additional perspective on the teacher retention literature.

Pathways to Placement

Ongoing debate still exists of whether good teachers are born or made. Fueled by a lack of evidence to correlate teacher preparation to student success (Cochran-Smith & Zeichner, 2005), public skepticism endures about whether formal teacher preparation is really necessary at all (Cochran-Smith et al., 2011). Skepticism combined with teacher shortages have contributed to an increase in of alternate teacher licensure pathways to ensure classrooms are led by licensed teachers. Cochran-Smith et al. (2011) point out that the terms "alternatively" licensed and "traditionally" licensed have been used "inconsistently and problematically" (p. 22) in the literature producing contested conclusions drawn from the findings. To generalize definitions of these terms, I have elected to consider college/university-sponsored programs to represent *traditional* pathways, while streamlined programs such as Teach for America (TfA) or lateral entry teacher programs to be considered as *alternative* pathways. Although the preponderance of studies rely on complex statistical analysis of large-scale survey data, there are but a few that utilize qualitative or even mixed methodologies. In this section, I will review

empirical literature that focuses on teacher education pathways and the implications on teacher retention.

LaTurner (2002) analyzed data from a nationally representative sample (Baccalaureate and Beyond Longitudinal Study; NCES, n.d.) to examine four separate pathways into teaching based in part on the number of semester hours and whether teachers received their teaching credentials. In his findings, the author concluded that teachers who earned their teaching credentials in math or science reported the highest commitment to teaching and expressed the highest intentions of teaching after two years.

Darling-Hammond, Holtzman, Gatlin, and Heilig (2005) “examined the question of how teacher preparation and certification influence teacher effectiveness for both TfA and other teachers” (p. 3) by longitudinally matching 132,071 fourth- and fifth-grade students’ (entering in 1996-1997) achievement test scores (TAAS, SAT-9, and Aprenda) to the 4,408 teachers they had during a five-year period. The authors found that TfA teachers were about as effective as other teachers of similar experience working under similar conditions. Analysis of the same data set for implications of teacher retention showed that between 57% and 90% of the TfA teachers departed after their second year and between 72% and 90% left after their third year. By comparison, only between 32% and 55% of non-TfA teachers left after three years during the same five-year period. Although teacher effectiveness remains a debated construct when measured by student performance on high stakes assessments, it is not a central focus of my analysis. However, I simply mention it here for its possible connection to teacher efficacy and persistence.

Boyd, Grossman, Lankford, Loeb, and Wykoff (2006) examined the attrition rates across varying licensure pathways among teachers in New York City. After only the first year of analysis, the attrition rates for TfA teachers (9%) and Teaching Fellows (10%) were lower than the attrition rate for traditionally prepared teachers (14%). Conversely, attrition rates among TfA corps members dramatically shifted after the second year (48%), third (66%), and fourth (81%) years, placing TfA teachers' retention rates well below those of traditionally licensed teachers. This finding is not surprising considering TfA teachers sign on for a two-year commitment to teach in hard-to-staff schools.

Furthermore, Kane, Rockoff, and Staiger (2008) conducted a seven year study on teacher attrition as a function of pathways to placement. They found a combined 50% of the Teaching Fellows and other traditionally certified teachers remained in the classroom, 45% of uncertified teachers, and only 18% of TfA teachers remained in the classroom over the course of their study. Similarly, Donaldson and Johnson (2010) studied the migration patterns of TfA teachers by following them after their initial two-year placement. The authors found approximately half of the TfA teachers left their initial placement after their two-year commitment, 44% remained in teaching and reported being committed to the profession. Not surprisingly, the authors also concluded from survey responses that teachers with the most challenging assignments, characterized by multiple assignments, or teaching out of area of expertise, were among the most likely to leave. This conclusion is of specific interest to this present study in that the science teacher participants recruited for this study work in challenging placements are appointed

to multiple teaching assignments, and in many cases teach outside of their area of expertise. Furthermore, many of the teachers working in the low-performing, rural schools selected for this study came to teaching through alternative licensure pathways like TfA.

To examine the impact of more traditional pathways into teaching, Fleener and Dahm (2007) conducted a retention analysis of 1,959 elementary teachers (871 exiting from Professional Development Schools [PDS]). Similarly, Latham and Vogt (2007) used regression analysis controlling for teacher demographics to study 1,056 teachers (506 exiting from Professional Development Schools). Each study reported participants exiting from PDS programs persisted longer than their non-PDS peers. In contrast, Reynolds, Ross, and Rakow (2002) analyzed participant responses to phone interviews and written surveys to conclude no difference in the persistence rate of PDS and non-PDS teachers. However, the authors noted that PDS graduates reported they felt more prepared to teach. Examination across studies seems to indicate that participation in PDS programs may increase the likelihood of retention. Yet, Fleener and Dahm (2007) recommend additional research to explore the specific aspects of the PDS program that contributes to an increased likelihood of retention. They speculate that collaboration, extended periods of time in classrooms, and development of teachers' commitment as possible factors that reduce turnover, suggesting additional research be performed to better contextualize the environments and interactions that support retention.

Malow-Iroff, O'Connor, and Bisland (2007) investigated the career decisions of entering through New York City's Teaching Fellows program utilizing survey data. The

authors found that career decisions were correlated to teachers' self-reports of students' socioeconomic status, perceived administrative support for teachers, and self-reports of teacher efficacy. While the construction of teachers' efficacy remains contested, one is left to wonder how teacher's self-efficacy is intertwined with student performance.

Nagy and Wang (2007) utilized survey data to examine 145 alternatively licensed teachers in New Jersey. Not surprisingly, the authors found that schools that offered extensive support by way of induction and mentoring, offered meaningful professional development, and were led by supportive administrators were more likely to retain teachers. Similarly, Ng and Peter (2009) used a narrative case study approach to examine the career decisions of five alternatively licensed teachers participating in a program designed to prepare teachers for urban-school placement. While all five communicated that they had planned to remain in teaching, only one returned to their initial placement and one was not rehired. The remaining three teachers who left their initial placement and elected to change school districts cited 'personal factors' as the most significant reason for departure.

In summary, pathways to placement have been shown to contribute to teacher retention. Teachers who are traditionally prepared or earn advanced degrees are more likely to remain in the profession. However, evidence from the studies reviewed above also indicate that persistence is also a function of teacher's perceptions of their environment, which may be a reflection of their pathways to placement. Missing from the existing research is a focused examination of teachers working in hard-to-staff

schools plagued by historic low-performance to reveal the meanings teachers make of their working conditions and how these meanings contribute to persistence.

Teacher Preparation

Much has been made of the impact of teacher preparation on student performance. In fact, some question whether a teacher's preparation has any direct positive impacts on student's performance (Cochran-Smith & Zeichner, 2005; Wilson, Floden, & Ferrini-Mundy, 2001). Others examine the implication of a teacher preparation on practice (Grossman & Thompson, 2008; Pardo, 2006; van Hover & Yeager, 2004) and still others examine the influence of one's process of learning to teach on teacher retention (Goode, Quartz, Barraza-Lyons, & Thomas, 2004; Hammerness, 2008; Johnson & Birkeland, 2003; Worthy, 2005).

Regarding a teacher's preparation on teaching practice, Grossman and Thompson (2008) followed three language arts teachers into their first year of teaching at a suburban high school. Although each was committed to reform oriented pedagogies during their teacher preparation, they temporarily abandoned innovative teaching practices they learned as pre-service teachers to acquiesce into more traditional and dominant types of instruction. Similarly, Pardo (2006) examined the transition of three teachers into their initial placements teaching in elementary schools in urban environments. Findings indicated that learning to teach in their setting was heavily influenced by the local context, the conflicts that arose from these contexts, and the ways individuals managed the conflicting aspects of their placements.

Generating a better understanding of school contexts and the ways they influence teacher's practice, van Hover and Yeager's (2004) study of high school history teachers revealed how threats to the inquiry-based history pedagogy developed during pre-service experiences was abandoned by teachers who yielded to the pressures of department chairs, Advanced Placement (AP) exams, and state accountability measures. Specifically, the authors note that school context did not honor teachers' vision of ideal mathematical practices and thus, they were abandoned.

Collectively, the above studies contribute both to an understanding of why teachers surrender to institutional norms and provide insight into the reasons innovative teaching practices eventually re-surface. For instance, teachers able to bridge teaching theory and practice through critique and reflection (Grossman & Thompson, 2008) or operating within collaborative learning communities (Pardo, 2006) overcame the tensions associated with local school contexts and resumed more reform-oriented pedagogies.

The process of learning to teach extends beyond pre-service teacher preparation and well into a teacher's initial placement. Just as the local contexts described above influenced teacher's practice, longitudinal and qualitative examination of teacher's experience during their early careers reveal that teachers who felt as though they contributed meaningfully to their local school context (Goode et al., 2004), were able to realize their personal visions of teaching in their classroom practices (Hammerness, 2008), and/or felt supported by colleagues who encouraged innovative teaching practices (Johnson & Birkeland, 2003; Worthy, 2005), were more likely to persist in their placements.

School and Organizational Characteristics Associated with Teacher Turnover

Although previous studies have, to some degree, implicated individual teacher characteristics as indicators of teacher retention, the resounding theme among contemporary studies on teacher retention suggest school and organizational characteristics influence teacher persistence (Carroll et al., 2000; Hanushek et al., 2004; Lankford, Loeb, & Wyckoff, 2002; Smith & Ingersoll, 2004; Stockard & Lehman, 2004). Described commonly as working conditions, characteristics such as facilities (Darling-Hammond, 2003; Hirsch & Emerick, 2006), administrative support and student discipline (Darling-Hammond, 2003; Guarino et al., 2006; Hirsch & Emerick, 2006; Ingersoll, 2001), student performance (Hanushek et al., 2004; Ingersoll, 2004; Johnson et al., 2011; Ladd, 2009), class size (Lankford et al., 2002), school climate (Kukla-Acevedo, 2009; Peterson & Deal, 2002; Wynn, Carboni, & Patall, 2007), and input on school-wide decisions (Hirsch & Emerick, 2006; Ingersoll, 2002) have been shown to contribute to teacher departure. Moreover, when teachers are asked why they decide to leave particular schools, lack of planning time, micromanaging administrators, limited autonomy, access to technology, lack of administrative support with student discipline, and collegial relationships contribute to overall poor working conditions contributing to reasons for attrition (Berry, 2008; Boyd, Lankford, Loeb, & Wyckoff, 2005; Certo & Fox, 2002; Darling-Hammond & Sykes, 2003; Ingersoll, 2001; Ingersoll & Smith, 2003; Inman & Marlow, 2004; Loeb et al., 2005; Weiss, 1999). Collectively, these individual factors contribute to school climate, which has also been implicated as a reason for teacher departure (Kukla-Acevedo, 2009; Peterson & Deal, 2002; Wynn et al., 2007).

In addition to structural characteristics *of* the school, student characteristics *in* the school have also been shown to contribute to teacher retention. For example, student socioeconomic status (Ingersoll, 2004), student performance (Hanushek et al., 2004; Ingersoll, 2004), and student demographics (Carroll et al., 2000; Hanushek et al., 2004) have been shown to influence teacher attrition. Moreover, the migration patterns of teachers demonstrates they leave schools with larger proportions of low-income and minority students (Ingersoll, 2001, 2004; Johnson & Birkeland, 2003; Shen, 1997), preferentially select schools with fewer minority students (Carroll et al., 2000; Johnson & Birkeland, 2003), select better-performing schools (Hanushek et al., 2004; Johnson & Birkeland, 2003), or pursue schools that emphasize student success and higher levels of student motivation (Johnson & Birkeland, 2003; Swars, Meyers, Mays, & Lack, 2009). In summary, factors *of* schools and *in* schools contribute to reproduce patterns of teacher attrition.

The majority of previously described research following the turn of the century closely resembles Ingersoll's (2001) groundbreaking work on teacher turnover and teacher shortages both in methodology and conclusions. Following the urge to “‘put the organization back’ into the analysis [by] examin[ing] these issues from the perspective of the schools and districts where these processes happen and within which teachers work” (Ingersoll & Perda, 2009, p. 7), a second wave in research on teacher retention examined the combined effects of multiple characteristics that contribute to teacher attrition.

Given that school and organizational characteristics seldom exist in isolation, statistical models combining policy insensitive characteristics such as school size, student

socioeconomic status, and standardized test performance or policy sensitive organizational characteristics such as salary, workload, facilities, resources, and leadership significantly contribute to teacher retention (Hughes, 2012). Interestingly, the same study revealed a third model comprised of policy insensitive characteristics such as instruction, student motivation, classroom management, and teacher efficacy failed to produce statistically significant contributions to teachers “who plan to teach until retirement and those who did not” (Hughes, 2012, p. 252).

School based working conditions contributing to teacher attrition generally map well onto student level characteristics such as socioeconomic status, student demographics, and student performance. It is for this reason that questions remain about whether decisions to leave are based on student achievement, student populations, socioeconomic status or working conditions.

In response, two studies directly examined the potential interaction between teacher characteristics and site-based characteristics on teacher turnover. Loeb et al. (2005) utilized telephone survey data of first-year teachers in California to conclude that policy insensitive characteristics such as racial, ethnic, poverty, and language composition of a schools’ student body contribute to teacher turnover. Furthermore, policy-amenable site-based characteristics, defined as working conditions “add substantial predictive power to models of turnover” (p. 65). In summary, the authors conclude when working conditions are added to the model of teacher turnover, the impact of student demographics is reduced—leaving one to surmise that working conditions are a more powerful predictor of teacher turnover than demographics of the student body.

Similarly, Horng (2009) surveyed 531 elementary teachers in California and asked participants to make choices between policy-amenable workplace characteristics such as school facilities, administrative support, class size, and policy resistant characteristics such as student demographics to conclude that clean and safe facilities, administrative support and small class sizes were more important to teacher's willingness to persist than salary or student demographics.

Teasing out variables that contribute to teacher turnover has confirmed many suspicions about conditions that contribute to teacher departure. However, perhaps career decisions are more nuanced and more sensitive to augmentation than the quantitative research suggests. For instance, school climate has been shown to have the greatest impact on teacher retention (Kukla-Acevedo, 2009; Peterson & Deal, 2002; Wynn et al., 2007), yet little is known about the ways school climate is constructed or the ways the characteristics that exist in schools combine to produce school climate.

In response to state and federal accountability models, statewide accountability policies have been explored as they pertain to teacher retention (Clotfelter, Ladd, Vigdor, & Diaz, 2004). Specifically, Clotfelter et al. (2004) examined the impact of a statewide accountability policy put in place in North Carolina in 1996 using a "rich micro-level data set" (p. 254) made available by the North Carolina Department of Public Instruction. The accountability policy, designed to measure student performance, results in the labeling of school such as 'school of distinction, 'school of excellence' or 'low performing schools.' The authors conclude that schools labeled as 'low-performing' experience higher rates of turnover as compared to periods before implementation of the

accountability policy. Interestingly, the authors found no distinguishable difference between the quality of the teachers—measured by percentage of beginning teachers and by the percentage of teachers arriving with degrees from noncompetitive colleges—to be different before—as opposed to after—the implementation of the accountability program. However, the authors did note that the number of novice teachers and those entering with degrees from noncompetitive colleges were higher in low-performing schools than in middle to high performing schools and remained constant during and after implementation of the state-wide accountability policy. These findings support that contextual factors found within schools, regardless of their overall performance, influence teacher retention rates.

Further, Achinstein et al. (2004), examining the influence of organizational context on teacher socialization, describe how differences in district capital shape their responses to state policy and how these differences contribute to the formation of multiple classes of teachers serving students based on socioeconomic status. Through their analysis, the authors highlight unexplored and unintended consequences of sorting and socializing novice teachers as school districts respond to accountability pressures associated with the No Child Left Behind Act. The authors note,

the creation of a class of schools and districts with pedagogical approaches emphasizing routines and direct instruction . . . affect the socialization of new teachers [and] contribute to the formation of two teacher tracks . . . reproduce[ing] inequities [that] contribute to the well-documented achievement gap along lines of race and social class. (p. 584).

Similarly, this notion is also promoted by Ingersoll's (2002, 2003) conclusions that beginning teachers working in disadvantaged schools are less likely to be traditionally prepared and are more likely to be assigned to teach outside of their area of expertise; suggesting achievement gaps have been constructed along racial and socioeconomic class.

Pursuit of a deeper examination of teacher retention has given rise to more contemporary qualitative studies to better understand how school-level characteristics influence teachers' career decisions. For instance, to provide a more descriptive analysis of the experiences of teachers in high-needs high schools, Petty, Fitchett, and O'Connor (2012) purposefully selected 47 schools in North Carolina meeting their definition of a high-needs school:

Schools where at least 80 percent of the children in the school attendance area are from low-income families or at least 80 percent of the student enrollment are from low-income families are eligible to receive federal Title I funds. (p. 70)

The authors contacted school principals fitting their criteria and invited teachers to participate in a study. Twenty-three of the 47 principals contacted agreed. The authors then distributed a survey online survey to the teachers in each school, broken into two parts. Part one of the survey included nine questions regarding teacher demographics while Part two contained a series of open ended questions such as "List three characteristics of successful teachers in high-needs high schools" or "In what ways could teacher preparation programs prepare beginning teachers to teach in high-needs high schools?" (p. 71). In order to develop a more comprehensive understanding of the

perspectives of teachers in high-needs high schools (HNHS), the authors focused their analysis on all of the teacher demographic questions and five of the nine open ended questions.

Privileging “participants’ discourse” (p. 72), Petty et al. (2012) analyzed 189 survey responses (response rate of 35%) to interpret the experiences of teachers in HNHS. The authors note that limited sample size of their study and missing data compromised the generalizability of their findings. Notwithstanding, Petty and colleagues concluded that teachers in HNHS reported being compassionate and caring, while demonstrating a sincere love for kids. The authors also reported that participants viewed classroom management and pedagogical flexibility as being important skills to possess when working in HNHS. While several participants reported having freedom to design instructional strategies to engage children in learning as important to their success in HNHS, teachers did not rate content area knowledge or working with a supportive administration as being as important to their work. These findings contradict previous research on teacher retention that claims a lack of administrative support is a primary reason for attrition (Darling-Hammond, 2003; Guarino et al., 2006; Hirsch & Emerick, 2006; Ingersoll, 2001; Loeb et al., 2005).

Petty and her colleagues (2012) asked how future teachers might be prepared to work in high needs high schools, one respondent noted, teachers should receive “some college training in high-needs schools to get a feel for the how it really is—the cultures, the supplies, the support” (p. 74). Another responded, “students [pre-service teachers] should have a realistic understanding of what goes on in schools generally and in high-

need schools specifically” (p. 74) to gain an appreciation of the culture. Still others spoke of the “real-life experiences” that exist in high-needs schools and teacher education programs were “out of touch” with the realities of these schools (p. 74). These recommendations made by teachers working in challenging placements reinforce the suggestion that “teacher education could play more of a role in identifying predictable dilemmas in teaching . . . [to help] preservice teachers negotiate responses to those dilemmas” (Grossman et al., 2001, p. 97).

Moreover, teachers wanted to be “treated with respect” (Petty et al., 2012, p. 76), be acknowledged for their accomplishments, and be “allowed to teach without unrealistic expectations” (p. 76) imposed by their administrators. One participant noted that generating a sense that they were “making a difference” (p. 76) was important in their career decisions. Additionally, 53% of the participants indicated their intent to stay at the school for the next five years. Among that group of reported ‘stayers,’ teachers reported enjoying their school environment (38%) and caring for their students (26%) as reasons that influenced their decision. However, it remains less clear how teachers construct their enjoyment and a feeling of caring from their students.

Among those participants in Petty et al.’s (2012) study who did not intend to stay in their current placement for the next five years, psychological burnout and administrative support were the most cited reasons for attrition. Typical responses clustered around feelings of isolation and a general lack of administrative support. Another participant wrote: “while I love my students, I feel I will burn out. The needs of

these students are so immense and demanding the needs suck the very life out of a teacher” (p. 78).

Generally, teacher accounts of the day-to-day operations of hard-to-staff schools, such as those offered by participants in Petty et al.’s (2012) study, are not predominant in the literature on teacher retention. While the authors privileged the voices of the teachers—going beyond survey responses to include open-ended questions, much more can be learned from such accounts if researchers and participants share in the construction of oral histories of teachers in hard-to-staff schools. Unfortunately, negotiating entry into these schools to collect stories from the field is challenging; perhaps explaining the relative absence in the teacher retention literature.

Connelly and Clandinin (1990), discuss gaining entry into the field as an ethical matter that is framed by principals that establish responsibilities for researchers and participants. Moreover, collecting and creating stories of the lived experiences of participants requires not only responsibility, but also “relationships among researchers and practitioners, constructed as a caring community” (p. 4). Petty and her co-authors had not established this type of relationship with their participants, as the only contact the researchers and the participants had occurred through survey instruments. Therefore, the researchers and participants did not engage in the co-construction of teachers’ storied practices thus limiting what can be learned from teachers’ experiences. In my work as a science instructional coach working in low-performing schools, I have been fortunate to work alongside science teachers for extended periods of time, which contributes to the

necessary rapport to provide access to their personal stories of lived experiences and meanings they constructed as practicing science teachers in hard-to-staff schools.

In summary, the quantitative research that predominates studies of teacher retention demonstrate that teachers prefer to work in orderly schools that allow some level of flexibility in deciding what and how to teach and feel as though they have some say in the day-to-day operations of the school are more likely to persist; yet, how these feelings and preferences are constructed by the teachers who act upon them to make career decisions remains nebulous.

Based upon my experiences in the schools described both by Clotfelter et al. (2004) and Petty et al. (2012), this present study examines only the experiences of science teachers working in hard-to-staff schools, privileging teacher voices, and focusing on the meanings they construct of the institutional structures and their interaction with them to construct moment-to-moment persistence.

Induction and Support

The work of secondary educators involves interaction with students and colleagues. However, the fact that teachers, especially new teachers, are described as being “lost at sea” (Kauffman, Johnson, Kardos, Liu, & Peske, 2002), or a characterization of teaching as “the profession that eats its young” (Halford, 1998, p. 33), or “cannibalizes its young” (Ingersoll & Smith, 2003, p. 28) suggest that sink or swim, trial by fire, or boot camp experiences fail to meet the needs of early career teachers in the field. With these apparent realities in mind, one must ask what supports are in place

to promote the development of new teachers who persist in challenging placements and what personal meanings are made as a result of such supports?

Studies show the effects of mentoring (Wang & Odell, 2002) and induction programs (Luft, Roehrig, & Patterson, 2003) are important in promoting teacher retention. However, Luft (2009) refers to induction programs and ongoing mentoring systems as “extreme case[s]” (p. 2377) because they are atypical in low-performing schools. Similarly, while having a mentor that shares the content area with a new teacher is important to the success of the relationship (Wang & Odell, 2002), first-year science teachers in low-performing schools identified the teacher next door to be just as important, regardless of content, to meet instructional and personal needs (Luft, 2009).

Induction may take many forms in schools, such as classes, workshops, orientations, seminars, or mentoring. It is from this perspective that Smith and Ingersoll (2004) evaluated the effectiveness of various components of induction, including mentoring to determine their collective effects on teacher turnover. Utilizing data from the 1999-2000 SASS and 2000-2001 TFS, which incidentally, expanded its items to explore a range of possible induction and mentoring supports from previously administered surveys, the authors focused specifically on teachers who began their careers in elementary or secondary schools in 1999, thereby limiting their study to first year teachers. Controlling for individual teacher characteristics (previously mentioned in this review), the authors found an association between induction and mentoring and the likelihood of teacher retention. The strongest factors in promoting teacher retention were “having a mentor from the same field, having common planning time with other teachers

in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers” (p. 35). Conversely, the weakest factors “were a reduced teaching schedule, a reduced number of preparations, and extra classroom assistance” (p. 35). The authors also acknowledged that support generally existed in bundles. For example, teachers who participated in an induction process were also likely to receive content specific mentoring. As the authors combined these bundles of support, they found that the effects reached statistical significance in predicting teacher turnover.

In summary, teachers who receive an array of support (e.g., teaching assignments that match area of expertise and are reasonably appropriated; collaborative colleagues; supportive parents, community and administrators; detailed yet flexible curriculum that promotes meaningful accountability, adequate and timely professional development; opportunities for professional growth; and safe and well-equipped facilities) can not only persist, but succeed in their work (Johnson & The Project on the Next Generation of Teachers, 2004). However, few schools, namely under resourced schools serving low-income students “provide all or even most of the workplace conditions that teachers need to do their job well and stay in teaching” (Johnson & The Project on the Next Generation of Teachers, 2004, p. 18).

Summary of Organizational Characteristics

Research shows that school sites are important factors in teachers’ career decisions. Although salary was once thought to be a powerful determinant of teachers’ overall satisfaction, evidence shows that other school-based characteristics are more

powerful in predicting teacher retention. Commonly described as working conditions, they have come to represent a collection of feelings of support, autonomy, and ability, combined with student behavior and effectiveness of school administrators contribute to teacher's career decisions. In sum, teachers who feel as though "their experiences with students and colleagues are rewarding" (Johnson & Birkeland, 2003, p. 606) manage to persist.

Limitations of Existing Research on Teacher Retention

A review of the current literature on teacher retention has three limitations as it pertains to this current study: (a) research on teacher retention has become overly dependent on survey methodology; (b) conclusions drawn from survey instruments generally lack theoretical grounding from a sociocultural perspective that accounts for improvisation and fails to consider differences that are likely to be found in subgroups of teacher populations (i.e., science teachers in hard-to-staff schools); and (c) survey methodology fails to capture the social and cultural construction of working conditions over time or the importance of personal agency in the everyday professional lives of science teachers.

Consequently, I base my argument for the need to further study teachers' experiences in low-performing, rural schools on three related limitations in the research literature: (a) shaky and somewhat tenuous conclusions about factors that predict teacher turnover; (b) an enigmatic silence of how institutional conditions contribute to teachers' decisions to stay or leave; and (c) a failure to acknowledge the historical, cultural, and

social production and reproduction of institutional conditions that shape and get shaped by teachers' meaning-making in their professional lives.

Teachers' decision to persist, change schools, or leave the profession altogether have historically been studied as events gathered by way of surveys at year's end. Research in this manner has appropriately identified that *some* teachers working in *some* schools have higher rates of attrition than others. However, it remains less clear how day-to-day events in the professional lives of teachers contribute to teacher attrition. By intentionally selecting low-performing, rural schools, the school and organizational characteristics contributing to turnover are concentrated thus making it likely to see moment-to-moment persistence in the lives of science teachers.

In the section that follows, I will position myself as a researcher in low-performing, rural schools, summarize the gaps in existing research on teacher retention paying close attention to retention of science teachers in hard-to-staff schools, and present a theoretical framework to guide my interpretation of teachers' stories as an approach to close these existing gaps.

Positional Statement

I have spent the past six and a half years working as an instructions coach, employed by the state, and assigned to support science teachers working in low-performing schools in a southern state. Some of the work I performed with teachers was pedagogical—requiring me to introduce and occasionally perform various instructional strategies to promote growth of both teachers and students. In other cases, my work with teachers was based in science content as I worked to develop teachers' understanding of

conceptual science and challenged traditional vocabulary-centered science. Collectively, science teachers and I identified enduring understandings and desired learning outcomes from the written curriculum. However, the majority of our work was conversational. Teachers discussed a myriad of issues that they themselves perceived as important in their day-to-day teaching. Among these, teachers discussed benchmarks, data walls, common assessments, pacing guides, interventions, regrouping, Professional Learning Communities (PLC) and Professional Learning Time (PLT), classwork, homework, progress-reports, principal reports, performance, proficiency, data retreats, workday professional development, and student growth. They discussed deficiencies in guidance, parent involvement, school leadership, instructional resources, student responsibility, and planning time. They mentioned bus duty, lunch duty, covering classes, and loss of planning time, principal observations, an absence of meaningful feedback, classroom competitions, and an absence of reliable technology, and I was in awe of the professional responsibilities that had been thrust upon these teachers and thought to myself, “This is why I’m here.”

As a science coach, I took my responsibility to help teachers navigate the pressures of working in a hard-to-staff school seriously. Consequently, I found myself often helping to explain the rationale for the many requests of teacher time, justified and helped disaggregate data on student performance clustered around specific content themes, assisted teachers when they were asked for reports to the principal on short notice, and helped teachers make sense of the data walls and shotgun professional development that was offered by convenience. I helped teachers write lesson plans and

coached them toward implementation. And finally, I led teachers in reflective practice about their performances and the outcomes observed among the students.

I initially began my work both in large urban districts as well as small rural schools, and although the demographics of the students were similar, I noticed some immediate differences. While large urban districts offered redundant, though sometimes competing systems of teacher support, rural schools lacked system-wide supports such as induction programs or healthy mentor support. In part, this was due in part to the fact that few teachers in rural schools had been teaching long enough to serve as mentors, or if they were assigned as mentors, there was no system of accountability to ensure mentor duties were met. Eventually, I found myself working exclusively in small, rural districts, which were largely agrarian and suffered from poverty. In them, I found first year teachers acting as department chairs, holding seats on school-based leadership and improvement teams, and wearing just as many hats (if not more) than some of the more senior faculty.

My experience in graduate school offered an opportunity to more formally examine the existing literature on student performance, academic engagement, and teacher retention and what I found was that the voiced experiences of the teachers like the ones I worked with daily failed to make a single journal. I had indeed found a hidden world—the low-performing, rural school.

The outcome of HtS schools that seemed most important to researchers from previous literature was whether teachers decided to stay or leave a particular school assignment. Subsequent studies focused attention to the reasons for teacher departure.

Among them, administrative support, student discipline, perceived autonomy, etc. correlated with teacher turnover. Yet, I found in my experience that these “factors” were actually cultural productions and subject to modification by the same collectives who were impacted by them. In other words, these factors were not so much things that could be measured with instruments, but socially and culturally produced conditions that lived and evolved inside the bounded system of school. More importantly, these conditions and the results that they seemingly produced were not fixed, nor were they purely deterministic in terms of the outcomes to which they were correlated. Instead, the very same conditions that influenced teacher turnover were formed and reformed by the very same individuals who fell victim to them. Or, more interestingly, challenged them daily.

For example, my experience as an instructional coach working in HtS schools has afforded the chance to witness the impact of attempts of institutional control of teaching practices and instructional strategies. In one school in particular, teachers were asked to create lesson plans to submit to administration that spanned 9-week intervals. Understandably, administration intended to assure that teachers were prepared to teach each day and wanted to document curriculum alignment. However, teachers, predominantly new to the profession and obedient rule followers, were left to their own devices to assemble these documents with little guidance as to the level of detail required by administration. Consequently, they spent countless hours meeting the challenges set forth by their administration. In the weeks that followed, new teachers heard that senior colleagues at the school rejected administration’s requirement and failed to submit the required documents. Further, new teachers were told they should not expect to receive

any feedback on the assembled documents, nor would they feel any repercussions if they failed to meet the expectations of their principal. Some science teachers shared with me their resentment toward these teachers who were not compliant and seemingly got away with it, while others remained more reserved in their judgment of their colleagues. In the intervals that followed during that school year, I witnessed as some new teachers maintained a compliant subject position and committed great effort to complete curriculum documents for the remainder of the semester, sharing with me that this is what was expected by those in power and being new, who were they to question. Alternatively, other new teachers authored new subject positions that challenged not only their initial subject position, but also the positions that were offered by administrators. Interestingly, these alternatively authored subject positions—those of defiance—were subsequently shared among new teachers and eventually taken up with increased frequency. The implementation of lesson plans in such a restrictive format serves as a single example of the ways institutional structures influence teachers' identity production, yet it should be appreciated that in this case, structures were not entirely deterministic of the subject positions or identity categories that developed among the teachers in research sites. Instead, individuals drew upon resources either in their school or past experiences to author new positions for themselves, which were later distributed more widely within the school.

Maxwell (2005) explains a longstanding tradition in research to treat a researcher's background, experience and identity as "bias" thereby suggesting its influence "be eliminated from the design" (p. 37). Instead, he argues for educational

research to recognize the researcher's perspective and experiences as valuable in informing one's conceptual framework. Furthermore, drawing from the work of Strauss who advocates for the use of one's experiences in designing qualitative research, "mine your experience, there is potential gold there!" (Strauss, 1997, p. 11, as cited in Maxwell, 2005, p. 38). Drawing from my own experiences, I present a theoretical framework through which teachers' lived experiences contribute to their storied lives working in low-performing, rural schools. Further, the framework allows for interpretation of the various meanings individuals make of the structures at play that impact the meanings they construct of their experience. In short, the theoretical framework allows for greater appreciation of the ways in which identities are produced in practice and how that production lends itself to the likelihood of persons remaining a part of that practice or electing instead to move. Additionally, the framework of the study allows for examination of the roles science teachers take on that act to reproduce or contest the culturally and socially produced conditions found in HtS schools.

Gaps in Our Understanding of Teacher Retention

Previously, teachers have been treated in the teacher retention literature as passive recipients of conditions that reside within the school thereby placing persistence as an outcome of policy sensitive and insensitive conditions. The overemphasis of institutional conditions as predictors of teacher turnover fails to recognize, or does not adequately address, the daily struggles, contradictions, and tensions contained within institutional discourses that impact teachers' career decisions. Conceptualizing teacher persistence as a process as opposed to a final-form or *achievement* allows us to examine it as it is

happening, in real time and under daily conditions. Likewise, conceptualizing persistence as an ongoing achievement acknowledges the competing basis of teacher identification, and subsequently directs our attention to the meanings teachers make of the conditions in which they find themselves operating.

To address the competing influences on teachers' persistence, it is useful to consider the ongoing tension between institutional structures and personal agency, which has remained hidden by quantitative methodologies examining teacher turnover. How teachers are positioned by others, how they negotiate difficult conditions, and how they author themselves within these circumstances represents the kind of identity work that remains unexamined by existing literature on teacher retention. Consequently, revealing how individuals are positioned and position themselves amidst institutional structures is a promising next step in understanding the daily struggles and contradictions science teachers face when constructing their persistence.

Time and again, the literature supports the notion that many predictors contribute to teacher attrition however, the mechanism by which teachers made career decisions to leave or stay, remains a mystery. Generating an appreciation for the ways individuals align themselves to, or challenge existing structures shows promise in understanding the ways science teachers persist in challenging situations.

Theoretical Framework

The day-to-day experiences of teachers working in hard-to-staff schools have gone unrecognized by past research on teacher retention. This is due in part to how “school” has been conceptualized statically—as a thing as opposed to a collection of

social and cultural activities. Consequently, previous research on teacher turnover has examined teacher attrition as an outcome as opposed to a process. For example, conditions shown to contribute to teacher turnover have been conceptualized as static outcomes with little attention paid to the ways in which they are produced, reproduced, or contested on the ground, in everyday activities and in teachers' daily narratives. Such an approach represents a shortcoming in past research, as these conceptualizations of teacher retention do not recognize the ways school-based conditions are socially and culturally produced and tend to underestimate the roles individuals take in pursuit of their persistence. Holland, Lachicotte, Skinner, and Cain (1998) summarize by stating: "In our vision, [all of us], individually and collectively, are not just products of our culture, not just respondents to the situation, but also and critically appropriators of cultural artifacts that we and others produce" (p. 17). Previous investigations of teacher retention in HtS schools fall short in acknowledging individuals as appropriators of cultural conditions.

"School" in the case of this investigation is not as much a place or a thing, instead it is conceptualized as complex networks of histories, policies, knowledge, processes, and rituals—a position taken up by Nespor (1997) who states, "we have to peel back the strings and rhizomes linking [school] to the outside world" (p. xi). Moreover, this imagined space substantiates the argument to examine teachers' experiences as social products, yet also acknowledging the perceptions of themselves as social producers. Inden (1990) describes the dual existence between products and producers through his conceptualization of agency whereby agency lies in "the realized capacity of people to act upon their world" (p. 23) through personal or collective agency. Holland et al. (1998)

specifically call attention to the tools of personal agency as semiotic mediators and heuristic devices. Semiotic mediation, involves the “voluntary control over [one’s] behavior . . . through the active construction and use of symbols” (Holland et al., 1998, p. 35) while heuristic devices are products of persons in practice, which serve to mediate an individual’s future behavior. As such, semiotic mediators and heuristic devices “can become the tools of agency or self-control and change” (Holland et al., 1998, p. 40), as individuals figure themselves in cultural practices.

Challenging the notion that science teachers are merely recipients, or more strongly, victims, of social, historical, and cultural circumstances in which they find themselves working as science teachers in hard-to-staff schools—a position taken up by past work on teacher retention, I acknowledge teachers as agents, who individually and collectively play roles to engage in practices that may inadvertently contribute to the reproduction of the status quo, or challenge them in fantastic or mundane ways. Consequently, as agents, teachers engage in an ongoing process of meaning-making whereby behaviors, artifacts, and labels not only carry meanings, but the meanings teachers create are continually reworked by their histories, challenged, or taken-up through acts of compliance within school worlds.

Holland et al.’s (1998) concept of figured worlds provides a framework to simultaneously consider the institutional structures of cultural worlds of and the individual acts of agency leveraged by individuals to position themselves within these cultural worlds. Examining science teachers’ participation in the figured world of HtS schools provides a frame-by-frame view of how cultural worlds are produced/ reproduced

to extend our understanding of teacher retention beyond an end product made available through traditional quantitative study. Based upon existing literature on teacher retention, this represents a novel approach to examining the phenomena of teacher retention that results in schools being hard to staff.

The sections that follow will serve two purposes: to define and describe the central concept of figured worlds by highlighting the specific constructs of figured worlds pertaining to the analysis of data and provide the reader with an awareness of how figured worlds have been used previously to examine individual activity in social and historical worlds.

Figured Worlds

In their seminal book *Identity and Agency in Cultural Worlds* Holland et al. (1998) draw upon the work of Vygotsky and Bakhtin, among others, to define figured worlds as “socially produced, culturally constructed activities” (p. 40) that act to shape identity development. Holland et al. (1998) posit figured worlds as a hybrid of both culturalist and constructivist perspectives as “a socially and culturally constructed realm of interpretation in which particular characters and actors are recognized, significance is assigned to certain acts, and particular out-comes are valued over others” (Holland et al., 1998, p. 52). According to its authors, figured worlds are collectively engineered “as-if” worlds of interpretation peopled with agents whose activities are partially bound by a specific set of forces generated within a socio-historical context. Furthermore, Urrieta (2007a) summarizes,

Figured worlds are thus formed through social interaction, and in them people ‘figure’ out who they are in relation to those around them . . . Through participation in figured worlds people can reconceptualize who they are, or shift who they understand themselves to be, as individuals or members of collectives. Through this figuring, individuals also come to understand their ability to craft their future participation, or agency. (p. 120)

Holland and her colleagues’ concept of figured worlds acknowledges the notion that individuals and groups of individuals are continuously engaged in identity formation, thus they draw upon the cultural resources at hand to produce objectifications and self-understandings that may guide subsequent behavior. However, the notion that identities are continuously being constructed leaves space, albeit small in many cases, for the self-direction resulting in personal agency through improvisation. Consequently, Holland and her colleagues argue agency results when individuals and collective groups are “caught in the tensions between past histories that have settled in them and the present discourses and images that attract them or somehow impinge upon them” (p. 4).

Figured worlds happen as social practices in historical time by maintaining their own language and operating by a set of socially constructed and institutionally accepted rules or structures producing hierarchies of power where different types of people are allowed access to various positions within the figured world. However, Holland et al. (1998) make a point to stop short of suggesting that actors participating in a figured world are culturally determined by their surrounding discourses but maintain a capacity for personal improvisation and imagination. Thus, figured worlds are formed through acts of participation/interaction that are guided, but not completely dictated by those who operate around them. Therefore, the ability to retain personal agency through

improvisation while operating within the figured world is significant and contributes to one's awareness of one's "ability to craft their future participation, or agency, in and across figured worlds" (Urrieta, 2007b, p. 120).

By conceptualizing persistence as temporal, complex, ever-changing and unique to individuals based upon their experiences and positions, Holland et al.'s (1998) figured world framework becomes powerful in identifying the subject positions made available to individual, but also how subjects are positioned by everyday practices in cultural worlds, and how individuals leverage opportunities to position themselves in cultural worlds. Such performances within a figured world align with or contest the subject positions made available by others through the taken for granted meanings of particular acts and outcomes. I chose to use Holland et al.'s (1998) concept of figured worlds because it combines aspects of locally situated culture and the ways power/status influence our thoughts, behavior, and ways of interpreting the world. Moreover, it provides opportunities to acknowledge how people can act creatively and improvise their activities within social interactions or structures. Holland and her colleague's work amplifies and brings to the fore ways in which taken-for-granted activities in life build, inform, and create/recreate identities and social spaces. For my analysis of science teachers' stories of their lived experience, I examine the ways participants author themselves within the socially and culturally constructed figured worlds available in low-performing, rural schools.

Science teachers occupy multiple figured worlds depending on the school—its geographic location and population, their teaching assignment—grade level and specific

content area, and the characteristics of the students they teach—socioeconomic status and academic ability. These figured worlds are constructed through certain activities and outcomes that are valued over others. Specifically, the figured worlds occupied by science teachers working in low-performing rural schools consist of students performing below grade level in reading and mathematics and below average graduation rates, thus contributing to a value system predicated on test performance and promotion.

Additionally, the figured world of teaching science in low-performing, rural schools maintains a distinct set of rules and language unique to its circumstances. For example, participants often use the term *non-negotiables* to describe a set of practices put in place by individuals occupying strata above that of the teacher. Such practices then become required performances of teachers and often result in the production of particular artifacts. Both the performances and artifacts are then subject to monitoring and potential scrutiny.

The concept of figured worlds provides a means to understand and describe a system of values, outcomes, meanings and performances that are significant to individuals who occupy particular social spaces. By acknowledging and taking into consideration importance of existing structures, how these structures are produced/reproduced and made available to individuals, and contribute to existing and future actions, figured worlds shows promise in exploring how teachers in hard-to-staff schools construct a willingness to persist. Finally, the figured world framework also acknowledges individuals' ability to position oneself through improvisations or alignment with the aspects of school culture found in their placements to examine how

these activities support or contest their willingness to persist. In the sections that follow, I will frame the importance of personal agency in figured worlds and clearly describe what evidences of agency I examined for this study.

Agency. Simply relating teacher turnover to aspects of school climate, such as working conditions disregards the nuanced ways in which individuals internalize, make meaning of, or challenge cultural worlds. Rather, understanding how and why individuals act out in ways becomes “both more significant and more interesting” (Holland et al., 1998, p. 31). However, past research on teacher retention has fallen short of explaining how meanings are made, how challenges to normative cultural practices are produced, and the kinds of challenges to status quo needed to persist with one’s career in hard-to-staff schools. Thus, examining the development and enactment of personal agency shows considerable promise in addressing these methodological shortcomings.

The ways individuals are positioned by, position themselves, and author alternative understandings of themselves and their circumstances depend on the context of their current experiences, their histories, and larger social structures. For example, a teacher who administers high stakes tests of accountability gains recognition and accumulates capital to challenge the status quo when his/her students perform well. Being recognized for her positive test scores one teacher described, “as a new teacher, they [administration] were on my back constantly and made many unjustified observations to harass me. At the end of the Fall semester, after Biology scores came back, it was like they left me alone and I could pretty much teach any way I wanted” (CG, personal communication, December 9, 2012). Alternatively, a teacher not able to

accumulate capital by way of positive test scores remains vulnerable because they lack the capital to substantiate their professional judgment and/or their ability to be recognized as good teachers. Agency, therefore, implies sets of knowledge, practices, and contexts unique to individuals to improve their position and ultimately change their world yet vary according to one's placement, grade level and performance.

According to a constructivist position, whenever people interact, social positioning, or the continual process of identification occurs. "Socially-constructed selves are subject to positioning by whatever powerful discourses [individuals] happen to encounter" (Holland et al., 1998, p. 27). In some instances, individuals resist social forces and the meanings that dominant discourses imply, however, all individuals remain at least provisionally affected by those forces, thus the role of structure must be considered when examining evidence of agency. To further the point, "social constructivism conceives discourses and practices to be the tools that build the self in contexts of power, rather than as expressions of stable interpretations of world values that have been imparted to the person through enculturation" (Holland et al., 1998, p. 27).

In the case of teaching science in low-performing, rural schools or other HtS schools, it seems that many cultural and historical forces act to position science teachers, especially those teachers at the early stages of their career who have not had the opportunity to accumulate human/cultural capital. For instance, in my experience coaching early career teachers I have found they often talk about their own teaching in relation to the kinds of teaching they see around them. Additionally, teachers speak of their teaching performances being superficially monitored yet, the associated scrutiny

from administrators or peers shaped the kinds of dispositions they constructed for themselves. According to Holland et al. (1998), even new comers operating in a figured world, “acquire positional dispositions and identities . . . [and] come to know signs as claims to categorical and relational positions, to status” (p. 142). In Bourdieu’s terms, “they learn a feel for the game” (Holland et al., 1998, p. 143) by generating a set of dispositions about themselves and in relation to where they can enter, the conversations they engage, the emotions they can display, and how they can act in a given situation. Learning the game and figuring a way to game the system then become acts of improvisational agency that serve to position individuals differently. To this point, the application of a sociocultural perspective has yet to be applied to the study of teacher retention in HtS schools. Doing so shows promise in generating a more sophisticated picture of nuanced social forces that act to position individuals, while appreciating the historical legacies and tensions created by these sociocultural forces. Thus, a sociocultural perspective provides an opportunity to recognize the activities of people-in-practice as they align/contest culturally produced structures through the recruitment and development of other social activities to affect change.

As an example, one first-year science teacher shared the purpose to have her board cluttered with standards, essential questions, and agendas that did not seem to connect with the lesson I was observing, leaving only a small space for her to draw representations of the water-cycle. When I asked her about the clutter and the mismatch she responded, “I just put that up in case administration walks in. All they care about is that the kids are quiet and that stuff is on the board. I don’t even think they care about

what or if the kids are learning” (JJ, personal communication, December 6, 2012). This example, like many, provides evidence of how teachers learn the game and position themselves just below the watchful eye of school administrators.

Drawing on the writings of Bakhtin and Vygotsky, Holland et al. (1998) present framework for a continuing cultural production of identities through discourses and imagined worlds. Bakhtin focused his writing on the social grounds of personal creativity and authority, while Vygotsky ascribed to a developmental approach to describe human behavior through semiotic mediation. Both however, “saw speech, language, literature and art as pivotal media through which consciousness and subjectivity develop” (Holland et al., 1998, p. viii). Therefore it is through participants’ language and descriptions of their experiences where I look for evidences of authoring as a form of agency to persist within the figured world of the rural, hard-to-staff school.

Positioning. Drawing again from Holland et al. (1998), in social practice, people are positioned by social and cultural forces—that is, individuals are positioned by others and how they are positioned is as much a function of social nature of the environment as the historical nature of it—a detail not addressed in previous studies of teacher retention. In addition, individuals also maintain the capacity to simultaneously position themselves through their actions to align or contest the positioning forces of a larger context-specific activity. Holland et al. (1998) acknowledge the positioning forces maintained through social work, yet the authors also call attention to the improvisational moves characterized by actors occupying figured worlds. Once again, methodological limitations of previous

studies on teacher retention fail to inform us of the identity work in which teachers engage to persist in HtS schools.

Holland et al. (1998) note the competing positions argued by culturalists and social constructivists by calling attention to the positioning forces made available in the Hindu Nepali town of Naudada where they sought to interview a participant of the lowest caste (Damai) named Gyanumaya. Aware of her social status occupying the lowest caste, Gyanumaya understood she was socially and culturally forbidden from entering the first floor of homes occupied by members of higher castes for fear of contamination. Consequently, when she was asked to attend an interview with Debra Skinner and Dorothy Holland on the second floor balcony, Gyanumaya, in a spectacular act of improvisation scaled the side of the home to attend the meeting thereby achieving two goals simultaneously: first she attended a meeting she perceived as valuable; and second, she found a way to arrive at the meeting without offending the cultural and socially constructed values she had acquired during her lived experience.

From a culturalist position, the authors acknowledge that explaining by how one speaks or conducts themselves in social setting is reflective of the experiences learned earlier on one's experience—"one strives to say [or do] whatever upholds the culturally constructed, moral world" (Holland et al., 1998, p. 13). However, the authors also argue that a constructivist's view of Gyanumaya's actions reveal "maneuverings, negotiations, impositions, and recreations of relations of status and entitlement" (p. 13). Consequently, Holland et al. (1998) call attention to the ways in which individuals are both positioned

by and position themselves within a larger social context representing the basis for identity work.

Missing from the literature in teacher retention is an explanation of how working conditions impact teachers' decision to persist. Although mention is made of teachers' perceptions of adequate administrative support (Johnson & Birkeland, 2003), autonomy (Ingersoll, 2001; Ingersoll & Alsalam, 1997; Weiss, 1999), and administrative support (Wynn et al., 2007) as reasons for teacher attrition, they, as well as similar studies of teacher retention, fall short in exploring how working conditions are produced, the discourses made available to teachers that contribute to working conditions, or the ways individuals are positioned by or position themselves through discourses common to rural hard-to-staff schools.

My experiences working with science teachers in low-performing and hard-to-staff schools afforded me with opportunities to see not only the ways science teachers are positioned by institutional structures and discourses, but also the ways these teachers developed and maintained a capacity to author new ways of being by aligning themselves with or contesting structures and discourses to pursue their persistence. Previous studies of teacher turnover have treated teachers as passive recipients of various aspects of school culture (e.g., administrative support, facilities, collaborative work environment, student performance) while failing to acknowledge the ways in which teachers get caught up in the contradictions, tensions, discord, and fragmentation created by the discursive pressures found in HtS schools. Conceptualizing persistence as a process as opposed to an achievement leaves room to examine the socially and culturally produced conditions

that influence one's position as teacher shaped by local discourses, meanings, and artifacts. Thus, generating an understanding of the ways teachers are positioned by and position themselves in specific contexts shows promise in understanding more deeply the problem of teacher retention.

Use of Figured Worlds in Recent Literature

Recently, Holland et al.'s (1998) concept of figured worlds have been applied to studies of education (Calebrese-Barton & Tan, 2010; Carlone, Scott, & Lowder, 2014; Dagenais, Day, & Toohey, 2006; Hatt, 2007; Pennington, 2007; Rubin, 2007; Urrieta, 2007a, 2007b) and its role in the cultural production of agency and identity thus, allowing for an examination of the institutional contexts in which science teachers in HtS schools have come to operate. What follows is a review of a few relatively recent studies that have used Holland et al.'s (1998) framework.

The framework of *figured worlds* (Holland et al., 1998) has been used in different ways to study identity and agency in educational settings by providing a “useful tool for studying identity production in education, particular sociocultural constructs in education, local educational contexts and can also be used as a practical tool for crafting figured worlds of possibility” (Urrieta, 2007a, p. 112). I am particularly interested in examining the narratives of science teachers to reveal the construction of “good teacher” and worlds of possibility created as teachers construct their willingness to persist. In the following paragraphs I will highlight ways figured worlds has been used to explore the production of available subject positions as well as examples of individual's responses to them.

Hatt (2007), following the Holland et al. (1998) framework of figured worlds, explored larger sociocultural constructs from the perspectives of students attending an urban school. The author concluded that the narrow ways “smartness” was defined greatly contributed to the low academic achievement present in their school.

Interestingly, in talking with the students, the author determined how students not only refused to define smartness in the narrow ways defined by their teachers, they actively distanced themselves from the dominant discourses of “school smarts”—defined by test scores, grades, diplomas or “papers,” or enrollment in honors courses. Students enacting personal and collective agency identified more with being street smart by being able to survive in their neighborhood by avoiding trouble.

In another example of the usefulness of figured worlds to explore sociocultural constructs, Pennington (2007) utilized figured worlds to describe the two worlds of literacy policy and literacy instruction in the light of No Child Left Behind educational reforms. Her study documents the struggles of Laura, a fourth grade teacher who, in the face of literacy reform that valued scripted curricula to raise test scores, led her not only to question the prescribed pedagogy, but improvise in ways that allowed her to feel efficacious despite the demands of educational reform. The author juxtaposed the positions of policy makers who use student level data to highlight the weaknesses of students and the ways these positions impact teachers. Laura improvised by enacting agency to look beyond the numbers and artifacts that characterized sound instruction by questioning the limitations of assessments to measure what her students knew and were able to do, thereby broadening the narrow meanings of “good teaching.”

Carlone et al. (2014) longitudinally examined three students through their fourth to sixth-grade school years. Using Holland's figured world framework as an analytic tool, the authors examined the interplay between structure and agency involved in the identity work of their participants. From this perspective, the authors illuminated the cultural and structural aspects of students' classrooms to reveal celebrated subject positions that enabled and/or constrained students' performances. Specifically, the authors used the figured world framework to explain how the *meanings* of celebrated subject positions changed depending on the classroom context. For instance, one Latino student, William, was a consistent worrier. In fourth grade this worrying was leveraged in service of robust scientific practices, and in sixth grade, he worried about getting the right answers in science class. Students positioned themselves and/or were positioned as "good science students" by inhabiting one, or many of the celebrated subject positions promoted within each classroom culture. Particularly relevant to my study are the ways the authors used the available cultural models as a tools to describe the production of celebrated subject positions and how students made meanings of these positions.

Another area that figured worlds have been used to explore is how specific contexts of education can privilege/constrains certain activity. For instance, Rubin (2007) utilized a figured world framework—a "socially and culturally constructed realm of interpretation" (Holland et al., 1998, p. 52), to explore how students develop senses of themselves amidst the practices (assignment of quizzes and bookwork), discourses (humiliating teacher-student exchanges wrought with sarcasm), categories (students labeled by speed in which they finished classwork or performance on quizzes), and

interactions (messages that presented learner identities of students with low ability, ignorant, and lacking basic skills) present in an urban high school. Rubin's thorough analysis of what was available to be learned, how it was to be learned, and who was recognized as learned proved consequential to students overall success in school. This study is particularly influential to my study in that it calls attention to how individuals—in this case students, are shaped and continuously shape the positions that are made available to them and how these interactions impact a sense of self.

Similarly, Dagenais et al. (2006) examine how the literacy practices invoked in a language immersion elementary school contributed to students framing of their social position. Dagenais et al.'s (2006) analysis is distinct from Rubin's (2007) in that the authors describe the notion of "differential currency" based upon their social position within the figured world. The authors describe Sarah who is characterized by two of her teachers as capable and thriving, and one who questioned her English skills to an extent where he questioned whether she would be able to continue in the French Immersion program. Naturally, these conflicting views of her ability impacted Sarah's involvement in each setting. In the settings where she was positioned as capable, she participated eagerly and leveraged her cultural experiences to position herself as a model student. In the context where she was positioned as a struggling student, she was reclusive and seemed 'intimidated' by the teacher's approach. The author's treatment of Sarah's experience in school caused me to wonder whether the ways teachers were positioned or thought of by their administrators would impact the kinds of teaching they enacted.

Operating under the assumption that teachers are not merely victims of poor working conditions and predestined for attrition, I call upon figured worlds for its usefulness in constructing worlds of possibility. Calabrese-Barton and Tan (2010) examined the worlds of possibility afforded to students enrolled in a summer science program. In their study the authors describe the ways and conditions that promoted students' ability and willingness to produce knowledge as opposed to merely being recipients of knowledge as traditional students in school. Likewise, in my experience I found that teachers too were active producers and frequently took advantage of opportunities to engage in practices that set them apart from their colleagues. Reflecting on these opportunities caused me to consider whether these productions contributed to their willingness to persist.

Summary

The framework of figured worlds provides a framework to explore one's affinity in culturally constructed worlds. It has been used to explore a wide array of educational contexts and thus, allows for three levels of interpretation for this present study: (a) it recognizes positioning and agency by way of people's social actions and interpretations; (b) it allows for a construction of a storied world from taken-for-granted events; and (c) it acknowledges the socio-historic production and reproduction of practicing individuals within a particular realm of interpretation.

CHAPTER III

METHODOLOGY

The purpose of this study is to solicit science teachers' stories teaching in low-performing rural schools to reveal how their experiences and meaning-making contribute to their willingness to persist. I argue that becoming a teacher is accompanied by the acquisition of a position or sense of self (Danielewicz, 2001), which is theorized as a dynamic, ongoing processes invariably linked to existing models locally produced and circulated widely across time and space (Wortham, 2006). What these local models are, how they are constructed, and by what means they are circulated, remains enigmatic. Guided by Holland et al.'s (1998) contextualized view of the ways structures and agency interplay to shape one's position and the meanings they make of their experience, this study explores the relationship between locally constructed realms of interpretation that guide individual's activity within these worlds paying close attention to the role of individual and collective agency guiding one's interpretations and responses.

Holland et al. (1998) calls attention to "how, and with what difficulties human actors, individuals, and groups are able to redirect themselves" (p. 278) in the face of social and cultural pressures. Alfred Schultz (as cited in Czarniawska, 2004) noted that it is only through one's intentions that we can understand human conduct, yet an appreciation for a specific setting is needed to make sense of one's intentions. Further, Czarniawska (2004) claims, "individual actors can be and have to be situated in order to

[make their intentions] intelligible” (p. 4). Thus, an examination of the storied lives of science teachers in HtS schools with an eye to agency and meaning-making will contribute to existing research on teacher retention.

Very little research has been conducted that privileges the voices and experiences of teachers working in particularly challenging working conditions—conditions that past research contends, contributes to teacher attrition. In response, this study employed a sociocultural perspective to examine the experiences of science teachers, through their stories, to better understand the social and cultural nature of institutional challenges, the ways individuals position themselves in relation to those challenges, and how their responses contribute to day-to-day persistence. The stories participants tell about themselves reveal how it is that teachers understand their own lives and the lives of others sharing the same setting (Czarniawska, 2004).

Consequently, this qualitative study represents an analysis of participant narratives as they construct the meaning of science teaching in low-performing, rural schools. Guiding this study are the following research questions:

Research Questions

1. What are the stories teachers tell about their decisions to teach in low-performing, rural schools?
2. How do science teachers in low-performing, rural schools story the realities that influence their teaching?
 - a. What positions are made available?
 - b. What actors are significant?

- c. What artifacts and discourses mediate teacher's stories?
- 3. In what ways do science teachers author themselves within and against the realities they describe as significant?
 - a. What do teachers' stories tell us about their willingness to persist?

This chapter begins with a discussion of the research methodology employed to explore my research questions. Next, I describe the selection of participants, which will include the selection criteria used to solicit participants for this study. Then, I will describe the methods used for data collection and close with a section to describe my analysis of data.

Research Methodology

Examining the retention of teachers in hard-to-staff schools using qualitative methods is not only relatively absent in the research literature but is specifically encouraged to expand our existing understanding of the phenomena of teacher retention in hard-to-staff schools (c.f. Brookhart & Freeman, 1992; Ingersoll & May, 2010; Ingersoll & Perda, 2009; Sloan, 2006). Specifically, Sloan (2006) writes, “in an effort to reveal complexities and uncertainties” rather than “overlook, conceal, or silence them” researchers must “look beyond the numbers” (p. 145) to situate researchers in long-term relationships with participants to better understand the ways in which school-level structures influence classroom practice, teacher identity, and career decisions.

The strengths of qualitative research rest upon its focus on people in specific situations, its emphasis on words as opposed to numbers, and its inductive approach (Maxwell, 2005). Qualitative research allows researchers to generate an understanding of

the *meaning* individuals in a particular situation make, an understanding or at the very least an awareness of a particular *context*, and illuminates the *process* by which events and actions take place (Maxwell, 2005). Since the meanings science teachers make, the context in which meanings are made, and the process by which persistence is constructed or not are central to this study, qualitative methodology is well suited to answer my research questions.

This study embraces a social constructivist paradigm where stories reveal “how teachers engage in the construction of narratives about themselves in the context of their schools, classrooms, and communities, as well as the current political context of their teaching and learning to teach” (Schultz & Ravitch, 2012, p. 37). Stories are constructed or negotiated in socially and historically produced contexts by complex webs of meanings (Creswell, 2007). Stories “invite us to come to know the world and our place in it” (Witherell & Noddings, 1991, p. 13) providing a window to view constructed or negotiated identities among science teachers working in hard-to-staff schools. A review of existing research on teacher retention demonstrates the overall absence of teachers’ voice effectively concealing the day-to-day experiences that contribute to one’s persistence. Thus, a qualitative approach provides a more nuanced view of the conditions found in schools and how they contribute to teachers’ career decisions.

Narrative Inquiry

Advocates of a narrative approach to studying social phenomena recognize stories involving the self are subjectively spun not only by narrators, but also by individuals sharing a particular setting. Consequently, participants in narrative research maintain

control over the stories they tell and the identities they project; “this is what power is about” (Czarniawska, 2004, p. 5). Further, narratives remain subject to larger spheres of influence. For instance, Davies and Harré (1991) note that we are never the sole authors of our own narratives. Instead, every conversation contains a *positioning* by others, which is accepted, rejected, or improved upon. However, the positioning of narratives remains distinct from positioning as a resource for social identification. In the latter, positioning is represented by an event that casts a recognizable classification of identity upon an individual (e.g. “good,” strict, or lenient teacher), yet constructed narratives in social settings are often created for others without directly involving them in a conversation, however, narratives represent a whole of experience and history.

The design for this qualitative study is narrative for its ability to “study . . . the ways humans experience the world” (Connelly & Clandinin, 1990, p. 2). Narrative inquiry uses among other things, stories and life experiences as primary units of analysis and “is a methodology that frequently appeals to teachers and teacher educators” (Clandinin, Pushor, & Orr, 2007, p. 21) because stories are told by “narrators [to] make sense of personal experience in relation to cultural discourses” (Chase, 2011, p. 422). Since this study seeks to examine the experiences of science teachers in low-performing, rural schools, narrative inquiry is a fitting methodology.

Narrative inquiry is predicated on the notion that “humans are storytelling organisms who, individually and socially, lead storied lives” (Connelly & Clandinin, 1990, p. 2). Narratives represent “lived experience—that is, in lives and how they are lived” (Clandinin & Connelly, 2000, p. xxii) shaped and shaped by participants’ narrative

environment in a reflexive interplay (Gubrium & Holstein, 2009) that serves to deepen our understanding of the cultural, historical, and political contexts found in hard-to-staff schools.

Chase (2005) outlines an approach to narrative inquiry that focuses specifically on how people author themselves within institutional, cultural, and discursive contexts focusing on the ways people's stories represent the quality of their life experiences situated in the interactions with others. Interactions between people involve, among other things an exchange of stories where experiences, interests, likes, requirements of practice, and even preferred social interactions are represented in their stories.

The decision to employ narrative inquiry was both personal and practical. As I described in my positional statement, my work with science teachers in low-performing schools involved the exchange of stories from our collective experience. As their coach my goal was two-fold: I was assigned to help improve teaching practices for the purpose of raising test scores, but I also sought to increase the likelihood teachers would persist in their challenging placements. Both outcomes were promoted through the telling and retelling of stories from our experience.

Practically speaking, the intent of narrative inquiry is to "give voice to marginalized people" by "naming silenced lives" (Chase, 2011, p. 428) or in Riessman's (2008) terminology, "amplifying" the voices of others. Because narratives represent the "fundamental structure of human experience" (Connelly & Clandinin, 1990, p. 2), the analysis of narratives reveals "the way these prevailing ideas affect not only individual lives but also the culture at large" (Chase, 2011, p. 429).

Narrative inquiry focuses on the taken for granted everyday experiences that constitute an individual's daily reality (Clandinin & Rosiek, 2007) by affording the researcher a view of the "contradictory and shifting nature of hegemonic discourses, which have [have been] take[en] for granted as monolithic forces" (Chase, 2011, p. 422). Past research on teacher retention have treated conditions that contribute to teacher turnover as fixed and immovable by the teachers that experience them. Conversely, narrative inquiry allows for a cultural examination of being where institutional structures are treated as dynamic and subject to manipulation and interpretation. For instance, Connelly and Clandinin (2006) posit that narrative inquiry's place in studying individuals' experience as a storied production of cultural practice:

The development and use of narrative inquiry come out of a view of human experience in which humans, individually and socially, lead storied lives. People shape their daily lives by stories of who they and others are and as they interpret their past in terms of these stories. Story, in the current idiom, is a portal through which a person enters the world and by which their experience of the world is interpreted and made personally meaningful. Viewed this way, narrative is the phenomenon studied in inquiry. Narrative inquiry, the study of experience as story, then, is first and foremost a way of thinking about experience. Narrative inquiry as a methodology entails a view of the phenomenon. To use narrative inquiry methodology is to adopt a particular narrative view of experience as phenomena under study. (p. 477)

Thus, narrative inquiry, serving simultaneously as a methodology and phenomenon, is suited to answer my research questions by addressing central aspects of the conceptual framework used in this study. For example, production of narratives allows the researcher to see evidence of personal agency, and positioning (Chase, 2011), while analysis of narratives provides a window to view acts of authoring and construction of

imaginary worlds (Czarniawska, 2004). Since I am interested in the ways participants make sense of their personal experience as teachers in hard-to-staff schools in relation to cultural discourses and how prevailing discourses influence their stories, narrative inquiry provides access to meanings that influence day-to-day persistence. Hence, it is by way of personal meanings science teachers make of their experience in hard-to-staff schools that contribute to what we, as teacher educators, consider as the social, cultural, and historical identity productions of science teachers in hard-to-staff schools.

Operating under the assumption that all social interactions, including teaching in HtS schools, involve telling stories of experience, and contained in these stories then, are the narrative identities produced by individuals in social practice, stories then, represent not only the ways social organizations are structured but also an indication of what is valued, what values are taken up into practice, and what opportunities are taken to challenge existing values by authoring new ways of being. Consequently, narratives represent an individual's effort to make sense and bring structure to their experience as well as appreciate attempts to author identities that challenge existing structures. According to Sfard and Prusak (2005), stories *are* an individual's identity reflecting values, meanings, interactions, and responses to social relations.

However, narrative inquiry is not without its critics. For example, narrative inquiry has been criticized as being overly dependent on the individual. Nevertheless, career decisions of teachers are rooted in individual experiences. An advantage of narrative inquiry is its ability to study individuals who come to operate socially with groups and communities (Connelly & Clandinin, 1990). Another limitation of narrative

inquiry rests on the researcher's ability to gain entry into the field to gather stories from participants. Connelly and Clandinin (1990), describe this as an ethical matter framed by principals that establish responsibilities for both researchers and participants. My history with the participants preceded the collection of data and my interaction with participants was predicated on mutual trust and support thereby satisfied the requirements described by Connelly and Clandinin.

In this case, situating a study of teacher retention within the storied lives generated by individuals living those experiences proves valuable in understanding how these stories are constructed both individually and collectively. Drawing from Dewey, Connelly and Clandinin (1990) describe that when one studies another's experience, it is in fact a study of that person's life, which includes an exploration of "epiphanies, rituals, routines, metaphors, and everyday actions" (p. 415). Further, they note that in studying experience, stories are the closest we can get to that experience, thereby representing a vicarious experience of others. The authors explain that "a story has a sense of being full, a sense of coming out of a personal and social history . . . People live stories, and in the telling of them reaffirm them, modify them, and create new ones" (p. 415). Consequently, examining teacher retention through the storied lives of teachers working in schools that historically reproduce high rates of turnover shows considerable promise in generating a more nuanced understanding of the conditions that promote teacher turnover and illuminate how individual responses may mitigate these inevitabilities.

Selection of Sites and Participants

Site selection. The selection of the setting and participants for this research followed a purposeful sampling method (Creswell, 2007). The aim was to select participants with whom I had a relationship with and would be likely to be faced with career decisions based upon their placement. Consequently, I selected middle (5-8) and high (9-12) schools in districts receiving comprehensive state-level support having been identified as low performing by way of criteria set forth by the General Assembly and the State Board of Education. According to the research on teacher retention, these conditions have been shown to contribute to teacher turnover.

The designation to receive state-level support is based upon meeting one of the following three criteria. Schools with a 4-year graduation rate of less than 60% for two of the previous three years qualify for state support. Schools with performance composites among the lowest 5% in the state qualify for state support. And finally, schools contained in districts with an aggregate performance of less than 65% proficiency also qualify for state support. As I stated in the previous section, school performance and district aggregates are determined by the annual administration of high stakes assessments in Reading and Mathematics (3-8), Science (5th and 8th), and high school assessments in Algebra I, English Language Arts I, and Biology.

Furthermore, I have worked in each of the selected sites as the science instructional coach, assigned by the State Department of Education, to provide instructional support to science teachers in historically low-performing schools. As a coach, my duties were to serve in familiar roles such as mentor, cooperating teacher,

facilitator, and colleague. The relationship I maintained with the participants afforded an opportunity to experience as an outside observer, the local culture, norms of practice, and power hierarchies circulating in each research setting. Further, my experiential knowledge of the sites and the conditions that exist within informed the selection of my conceptual framework, methodology, and construction of my interview protocol (see *Positional Statement*, p. 42 in this dissertation for a description of my role as instructional coach and what it affords related to the research design and analytical lens).

Selection of participants. Participants for this study were purposefully drawn from a population of middle and high school science teachers with whom I have worked with as an instructional coach for a minimum of six months and for as long as 24 months. During this time, a trusting and positive relationship grounded in support was established and cultured and my relationship with participants provided access to their personal stories (Connelly & Clandinin, 1990). As a matter of fact, my relationship with participants and their life stories informed the design of this study. I have grown to appreciate each of the participants' contributions to their respective schools. In other words, each had demonstrated characteristics of competent educators and had accumulated some degree of success teaching science in hard-to-staff schools. That is, they felt confident that their activities helped to promote student learning and spoke openly about the ways they had been able to achieve their feelings of competency. Due to the hard-won feelings of accomplishment in a low-performing, rural school, their stories are compelling and showed promise in preparing future teachers for similar placements.

According to Chase (2011), the goal of narrative research is to use personal relationships to “work collaboratively with research participants to improve the quality of their everyday experiences” (pp. 421–422). Similarly, narrative researchers work closely with participants and their stories to transform the researcher-participant “relationship into one of narrator and listener” (Chase, 2011, p. 423). Finally, according to Polkinghorn (as cited in Chase, 2011), “narrative interviewing involves an intensive interaction with the narrator and the patience to explore memories and deeper understanding of their experiences” (p. 424), which can take years to develop. Therefore, my past experience working with teachers in my proposed research sites along with my experience working with participants themselves is warranted for narrative analysis.

Following IRB approval to involve human subjects, I contacted participants in person and asked them if they would participate in a study of teacher retention in hard-to-staff schools. I invited participants through personal communication followed by a formal written invitation, which included explicit details of the study along with a consent form (see Appendix A). Nine of the fourteen prospective participants agreed to participate. Prior to data collection I asked participants to read the conditions contained in the informed consent form, sign, and return an agreement to be kept on file.

Description of setting. According to research, the setting where teachers work can have a significant impact on the likelihood of teacher persistence and therefore constitutes the central phenomena being studied (Ingersoll, 2004; Johnson et al., 2011; Ladd, 2009). Hard-to-staff schools—schools experiencing a greater than average annual rate of teacher turnover shows promise in understanding retention or attrition as a process

rather than an event. Previous literature reviewed in Chapter II suggests that *some* schools contribute to teacher attrition more than others. Thus, I purposefully selected teachers to participate in my study who teach science in state-identified low-performing schools as locations that produce turnover at higher than average rates.

Moreover, rural schools exist in a unique environment as compared to other types of schools in public education (Arnold, 2005), yet they are expected to operate under the same laws and comparable expectations as their urban and suburban counterparts. Although the general tendencies of rural schools include less specialization, less equipment, less bureaucracy, and a heavy reliance on the individual qualities of teachers, Oliver (2007) points out the fact that the term *rural* when conceptualizing schools is problematic. However, according to the U.S. Census Bureau, rural is defined as “a residential category of places outside urbanized areas in open country, or in communities with less than 2,500 inhabitants, or where the population density is less than 1000 inhabitants per square mile” (Stern, 1994, as cited in Oliver, 2013, p. 346). Furthermore, according to the North Carolina Rural Economic Development Center, all but 15 counties in the state are distinguished as being rural (<http://www.ncruralcenter.org>). Consequently, the research sites where participants were drawn were identified as rural schools.

My selection criteria was informed by my own experiences working in state identified low-performing schools in both rural and urban centers, however, informed by the literature, I selected to specifically focus on teachers working in rural schools due to reports of slightly higher turnover rates as compared to urban schools (Ingersoll, 2004).

Description of participants.

Lydia. The oldest of two siblings and daughter of a kindergarten teacher, Lydia maintained a strong affinity for school and the affordances of a sound education. Motivated by a desire to serve, Lydia elected to join TfA late in her undergraduate studies and called her decision to teach an act of fate.

At the time of data collection, Lydia, a Caucasian female was in her second year of teaching science. Teaching a split assignment, Lydia taught seventh- and eighth-grade science at a 6-8 middle school recently reorganized from a 6-12 school the year prior. I had come to meet Lydia midway through her first year in her teaching assignment, which at the time was teaching eighth-grade science, and although she lacked traditional teacher training, she drew upon the positive experiences of schooling and advice from her mother.

Following her two-year commitment with TfA, Lydia continues to teach at a low-performing school in a neighboring state.

Lori. Lori, a Caucasian female first-year science teacher, taught fifth-grade science in a low-performing, rural middle school. Her decision to teach developed while a student attending what she described as a neighborhood school in an area of Florida undergoing economic rehabilitation. While her parents renovated a house in this area, they insisted she attend the neighborhood public school as opposed to the private school that her friends had attended. This experience provided Lori the opportunity to see the disparities between what she had experienced in school and the experiences of her friends.

Lori, an elementary education major in college, decided to join TfA because it would assure her placement in a school serving economically disadvantaged students and provide an opportunity to impact students facing the similar educational constraints she experienced while a student in similar schools. I came to know Lori as she began her experience as a science teacher in her current placement and at the time of data collection, she had spent four months teaching.

Lori completed her two-year commitment to TfA in her assigned school and recently began her third year in her placement.

Teena. Teena, a Caucasian female science teacher and TfA Corps member, had taught science in a STEM high school for two-years. Following her diagnosis with a chronic illness, her unpleasant hospital stays gave rise to her decision to deviate from a career in medicine and instead responded to a long-standing desire to be a teacher. Drawing from her own experiences attending schools serving economically disadvantaged students and her fulfillment in her role as a mentor and coach, Teena decided to join TfA for the opportunity to teach without the requirements of traditional teacher preparation.

I came to know Teena as she began her teaching assignment in a low-performing, rural high school where she was assigned to teach Earth Science, Biology, and Advanced Biology on a block schedule. During that time, I saw Teena transform from an insecure science teacher into one of the more promising science teachers I had worked with in my role as instructional coach. At the time of the data collection, Teena had left the

classroom, but remained in education providing instructional support to TfA Corps in the district where she formerly taught.

Phyllis. Phyllis is a Caucasian female assigned to teach 8th grade science in a middle school contained in the same district where Teena worked. Additionally, she shares her school with Lori and Anne, participants in this study, who teach 5th and 6th grade science, respectively. Like all of her colleagues in the district, Phyllis was a TfA Corps member assigned to the district to offset the high rates of teacher turnover.

Owing to her family's suggestion to become a teacher, she decided to shelve aspirations to attend medical school and after learning of the TfA mission, decided to utilize her transition years to teach. She subsequently joined TfA and was placed as an 8th grade science teacher. I came to know Phyllis when her career as a science teacher began. And like Teena, watched her develop into a promising science educator and demonstrated herself as such among her supervisors and colleagues. At the time of data collection, Phyllis was well into her second year teaching and was actively contemplating her future in education and her future in her current placement.

Following the completion of her two-year commitment, Phyllis continues her career in education serving as a teacher in a Charter school in Washington D.C. and is pursuing her M.Ed.

Anne. Anne, a Caucasian female assigned to teach 6th grade was drawn toward a career in education following a college internship at a STEM school in the Cleveland City School System. Assigned as a teaching assistant, Anne gained an appreciation for the accomplishments of “the kids that society writes off” when they had authentic

experiences doing science. Soon after, Anne elected to apply and was accepted as a TfA Corp member.

Anne and Phyllis arrived in their school during the same year, and like Phyllis, I had worked with Anne as an instructional coach upon her arrival. However, teaching sixth-grade science did not convey the same pressures as teaching eighth-grade science. Consequently, her middle school teaching experience was similar, yet distinct from that of Phyllis.

Anne completed her two-year commitment with TfA and then was accepted to dental school. She has since left education altogether.

Donnasue. Donnasue is a Caucasian female science teacher assigned to teach 8th grade science in a low-performing, rural middle school. At the time I collected data for this study, Donnasue was in her first year teaching. Our professional relationship began from the onset.

Donnasue described a genuine passion and enjoyment of learning. She excelled in school and attributed her success to the positive reinforcement and encouragement she received from her parents. Donnasue was influenced to join TfA and teach economically disadvantaged students following a summer where she served as a camp counselor for underprivileged studentS in Baltimore MD. The students, who boarded at the camp free of charge, made Donnasue aware of a counter narrative to her experience as a student in school. Donnasue emerged from her summer experience with a notion that children from poverty have much more to deal with, but they all want to “feel loved” and “succeed.”

Donnasue completed her second year of a two commitment to TfA and now teaches at a Knowledge is Power Program (KIPP) in Washington D.C.

Meegan. Meegan, a Caucasian female was assigned to teach high school science in the same district as Donnasue. Meegan admittedly did not have a clear career pathway in mind while studying as an undergraduate, but found her strength while tutoring peers. Additionally, her experience in her school's Center for Leadership and Civic Education revealed inequities in education that many school-aged students are experiencing. This, coupled with the experiences of her brothers who, rather than attend a poor-performing school in New Orleans, had elected to attend private schools, solidified Meegan's decision to teach. Learning of the TfA mission while simultaneously preparing an application to work as a substitute teacher, Meegan joined TfA and was placed in a low-performing, rural school where I met her in my work as an instructional coach.

Unlike the previously participants I previously described, Meegan immediately presented herself as being unique. Equipped with a strong sense of purpose and an even stronger energy, she began her teaching career "guns-a-blazin'" and ready to transform the experience of all who came into contact with her.

Meegan was assigned to teach Chemistry, AP Biology, and Biology while also serving as science department chairperson, despite it being her first year in education. However, as a non-science major in college, her lack of content knowledge was an enduring concern.

Meegan completed her two-year commitment to TfA and recently accepted employment as Business Manager for three KIPP schools in Washington D.C.

Carol. Carla is the most senior participant in this study, serving students in rural and low-income communities for 41 years. An African American female with 30 years of teaching experience in a neighboring state, Carol was currently in her 11th year in the same school as Donnasue. However, assigned to teach seventh-grade science, Carol's and Donnasue's paths rarely crossed.

Carol admits to teaching the "lower level" or "slow learners" during her career and found them to be "well-mannered" and quite "teachable." Carol was influenced to teach by her father's strong desire to see his daughter become a teacher and recalls the ways teachers from her days as a student were revered within the community, placing them alongside members of the church or local government. Regrettably, she sees a stark contrast to the ways teachers are currently positioned in her community.

As a seventh-grade science teacher in her current placement, Carol was not held accountable for student performance measures such as high stakes assessment scores. However, her awareness of the unintended consequences of such measures was evident. She recalls fond memories of her service to rural students and wishes students and teachers received the same supports from parents, community members, and administrators, as was the case in her younger years.

Even today, Carol continues to serve the students she has become familiar with over her career and is proud of her son who decided to follow in her footsteps and teaches in a neighboring state.

Kyla. Born in the Philippines, attending Catholic schools, and earning a master's degree in education, Kyla applied to teach in the United States 11 years ago as a visiting

international teacher. She claims to have been accepted because she taught science. Now in her 20th year of education and fifth year working with Carol, Kyla recalls the differences in education today as compared to what she was accustomed with the Catholic sisters in the Philippines and even her experiences while teaching in the United States. “It was a culture shock,” she exclaimed.

As Carol’s partner, assigned to teach seventh-grade science, she and Carol have developed a warm relationship and each credits the other with their willingness to continue teaching at their school. Through their collaboration, friendship, and willingness to help each other plan and teach, each managed to sustain their work through the other’s camaraderie.

Summary of teaching assignments. Teachers participating in this study were held to various standards as they taught science in their respective schools, grade levels, and subject areas. It is important to state that teaching assignments of each participant were significant to the stories they told of their experiences and production of day-to-day persistence. In the southern state where I recruited participants, the impact of NCLB and more recently, the Race to the Top federal grant were important political forces for teachers and influenced their stories in similar, yet unique ways. For example, teachers of fifth- and eighth-grade science were held accountable by annual measures of student performance collected through administration of high-stakes, end-of-grade tests. Additionally, participants teaching high school science were measured by the administration of a high-stakes, end-of-course test in Biology. Collectively, the teachers of tested subjects were known as “core teachers” and the scores their students produced

contributed to the performance composite of the school—the very same composite that distinguished their schools as low performing. Conversely, those teachers assigned to sixth- or seventh-grade science or high school science courses such as AP Environmental Science, Earth Science, or Chemistry were not held to the same accountability standards as their colleagues.

Among the participants selected for this study, the majority (7 out of 9) of participants were Teach for America (TfA) Corps members, which is common to hard-to-staff schools in district electing to participate in the TfA program. For those districts electing to not hire TfA corps members, it is not uncommon to find a combination of early career teachers, lateral entry or similarly non-traditionally licensed teachers comprising their science faculty. However, one participant (Lori) had completed a both a traditional teacher education program and also elected to join TfA for the opportunities to teach economically disadvantaged students. According to the TfA website, the TfA mission is to “provide an excellent education for kids in low-income communities” (<http://www.teachforamerica.org/our-mission/a-solvable-problem>). Of the two remaining participants who were not members of TfA, one was a 41-year veteran of teaching, and the other was a Visiting International Faculty member from the Philippines.

These low-performing, rural schools, they were also identified as hard to staff due to the alarming rate of teacher turnover each year, which is why the school districts containing each research site maintained a relationship with TfA (to offset the high rates of turnover). Consequently, it was not uncommon to find upwards of 50% of the teaching faculty made up of TfA Corp members in the selected sites.

Data Collection

Although narrative researchers can use many sources of data, in-depth interviews continue to be the most common source of for narrative inquiry (Chase, 2011).

According to Seidman (2006), interviews work well when there are stories to be told which allows the interviewer to share in the experiences and add subjective reasoning.

However, Chase (2005) notes that narrative inquiry requires the researcher to depart from conventional qualitative approaches that ask participants to generalize about the experiences. Instead the researcher should invite narrators' specific stories.

Consequently, I encouraged participants to talk about their lives as teachers in hard-to-staff schools; their relationships with colleagues, students, parents, and administrators; and what they considered to be pleasing or stressful in their daily work. I did this by encouraging casual dialog about their everyday experiences and the meanings they constructed. Polkinghorne (2007) notes that narrative research "issues claims about the meaning life events hold for people. It makes claims about how people understand situations, others, and themselves" (p. 476).

In keeping with a narrative inquiry approach, I collected data in four directions: inward, outward, backward and forward (Clandinin & Connelly, 1994). This means that the interview questions contained in each of the phases stimulated participants to include in their stories their internal psychological states by way of their feelings (e.g., What aspects of your role as a science teacher were surprising?)—inward; the influence of the environmental and social structure (e.g., What kinds of teaching practices were valued? Who communicated this system of values to you? What were the expectations of

teachers' practice?)—outward; the influence of events that led them to their current placement (e.g., What about your past led to your decision to teach in a low-performing, rural school?)—backward; and their ideas about their teaching future (e.g., How do you feel about your future in teaching?)—forward.

Consequently, I employed a semi-structured interview (See Appendix A) to establish a more conversational tone to the interview process. In writing about interviews as a method of data collection for narrative analysis, Czarniawska (2004) draws on the work of Kvale (1996) in *Interviews: An Introduction to Qualitative Research Interviewing*, that calls attention to the power asymmetry that typically exists in interviews. For example, the researcher assumes the position of power as the 'interrogation' of the participant proceeds. Conversely, interviews conducted for narrative research place the participants in positions of power, for it is the participants who have "knowledge of their own lives . . . [therefore], what the researcher has to offer in exchange is not their views but their respectful and interested attention" (Czarniawska, 2004, p. 48).

Following Seidman's (2006) recommendations, I collected data in three distinct phases. First, I asked participants to share their life histories that led them to teach in low-performing schools. The second interview focused attention on eliciting the details of participants' lived experiences as science teachers in hard-to-staff schools. Specifically, I asked questions to solicit responses from teachers about practices common to their experience as science teachers. In the final phase of the interview, I asked participants to reflect on the personal meanings they generated through their experiences,

describe their responses to the conditions they faced, and reflect on their willingness to persist.

Interviews were conducted after school at times and locations most convenient for the participants. In some cases they were conducted in classrooms or public libraries. Similarly, at the request of some participants, interviews were conducted simultaneously. For instance, Table 1 details by way of alphanumeric codes the participants who requested to be interviewed simultaneously.

Table 1
Summary of Participants' Background

Participant	Teaching Assignment	Years Teaching	Affiliation/Preparation
Lydia	Eighth-grade science [†]	18 months	TfA
Lori	Fifth-grade science [†]	6 months	TfA [*]
Teena	Biology [†] , Honors Biology, Earth Science	2.5 years	TfA
Phyllis ^{a-1, 2, & 3}	Eighth-grade science [†]	18 months	TfA
Anne ^{a-1, 2, & 3}	Sixth-grade science	18 months	TfA
Donnasue ^{b-2&3}	Eighth-grade science [†]	6 months	TfA
Meegan ^{b-2&3}	Chemistry, AP Environmental Science,	6 months	TfA
Kyla ^{c-1, 2, & 3}	Seventh-grade science	20 years	VIF [*]
Carol ^{c-1, 2, & 3}	Seventh-grade science	41 years	Traditional preparation

^{*} denotes traditional preparation

[†] denotes tested subject/grade level

Superscript denotes which interviews were conducted simultaneously

I audiotaped all three phases of participant interviews, which lasted between 60 and 90 minutes and scheduled a minimum of three days apart from one another. This is concordant to Seidman's (2006) recommendation that data collection be separated to allow the participants time to reflect and to allow the researcher to review recordings of previous interviews and modify interview questions clarify and probe deeper. Further, conducting multiple interviews served as a tool for validating participants' stories (Seidman, 2006). For instance, if participant's tone and subject are in agreement, they contribute to the validity of the participant's experience.

All audio-recorded interviews were reviewed with an ear for the voices *within* each interview (Riessman, 2008, emphasis in original) prior to engaging each participant in the next interview. For example, if a participant struggled to identify specific examples that were frustrating or challenging, I allowed participants time to reflect and probed further in subsequent interviews. Additionally, interviews were conversational allowing stories to be recursive, which allowed for saturation of themes. Following the completion of all interviews, I engaged in an active process of listening to the voices and stories told by each participant while suspending my analysis of them—a process also suggested by Riessman (2008).

One of the strengths of conducting multiple interviews and personalizing the interview to solicit participants' stories is that questions can be individualized to establish in-depth communication with research participants (Patton, 2002) resulting in more of a conversational feel. Further, combining participant responses from previous phases of

the interview process and the central focus of each interview phase increases the depth of understanding of the participant's experiences.

Data Analysis

Upon completion of all interviews, I employed the service of a transcriptionist to generate text from the audio recordings. I listened to all of the interviews, suspending judgment in order to check them for accuracy against the transcripts. After assuring accuracy of the transcripts, I listened to the interviews while reading the transcripts to identify significant statements using the review tool in Microsoft Word to generate preliminary analytic notes. I then performed an iterative review of all recordings, significant statements and analytic notes to construct preliminary codes, which I tabulated in Microsoft Excel. This step facilitated searching for supporting evidences from participant data to substantiate emerging codes displayed in Tables 2 and 3.

For ease of presentation, it was necessary to collapse some emerging codes (e.g., unstable, turnover, expectations, flexible, and control) into assertions (e.g., changing expectations of practice) and organized them into an illustration (see Figure 1) based upon their relatedness and context in which participants mentioned them. I will return to describe and discuss the construction of Figure 1 while detailing how it was used to interpret my findings. As a final step, I reviewed interviews, transcripts and analytic notes a final time to compare them to Figure 1 checking for goodness of fit and potential discrepancies in my interpretation.

This process was repeated three times to answer each of my research questions. In the following sections I will describe in further detail the codes, themes and assertions arising from teacher narratives used to address each research question.

Thematic Analysis

Both inductive and deductive analysis of data guided interpretation, organization and presentation of the data. An inductive approach to data analysis is common to narrative research to address the research questions that guided this study. Interview data and subsequent analysis produced “a part, a sample of [teachers’] reality” (Czarniawska, 2004, p. 49). Therefore, analyzing and interpreting the stories told by science teachers is an attempt to understand how participants construct an understanding of themselves as teachers in hard-to-staff schools and how these understandings of themselves contribute to their persistence.

In addressing my first research question, *[W]hat are the stories teachers tell about their decisions to teach in low-performing, rural schools?* I examined the historical, personal, and experiential resources science teachers in hard-to-staff schools drew upon to pursue a career teaching in a hard-to-staff school. Data for this analysis emerged primarily during the first interview. Below I present Table 2 to indicate the emerging codes from participant stories and supporting generalizations from evidence in their narratives. In Chapter IV, I will return to these themes and discuss them in greater depth.

Table 2

Teachers' Stories of Themselves Contributing to Their Decision to Teach in Hard-to-Staff Schools

Codes	Evidence
Social Justice	<ul style="list-style-type: none"> • Having direct experience as or with students of poverty, historically underserved in public schools. • Motivated to teach by a desire to disrupt the status quo.
Giving back	<ul style="list-style-type: none"> • Acknowledged the affordances their education had provided. • A desire to provide similar experiences for those less fortunate.
Affective	<ul style="list-style-type: none"> • Deriving pleasure from helping others. • Experienced positive feelings as a result of working with school-aged youth.
Status	<ul style="list-style-type: none"> • Members of community and family held teachers in high social status. • Teaching was an admirable profession and they were highly regarded.

In addressing research question 2: *How do science teachers in low-performing, rural schools story the realities that influence their teaching?* I drew from the Holland et al.'s (1998) figured world theoretical framework to examine the practices made available to teachers in low-performing, rural schools; and how those practices gave rise to certain structures to shape the meanings of "science teacher" and "good teacher" in low-performing rural schools. In total, ten codes emerged from participant interviews and are presented in Table 3.

Table 3

Summary Table of Codes Emerging from Teachers' Descriptions of Teaching Conditions

Codes	Description of evidence
Control	<ul style="list-style-type: none"> • Good teachers are recognized for maintaining quiet orderly students seated in rows and busily doing work. • Rote and repetitive teaching is valued.
Curriculum	<ul style="list-style-type: none"> • Pacing guide and interim assessments maintain instructional pace and sufficient curriculum coverage. • Superficial instruction is promoted.
Expectations	<ul style="list-style-type: none"> • Teachers took up their teaching practices from the kinds of teaching and teacher expectations they saw around them.
Test scores	<ul style="list-style-type: none"> • Teaching performances are evaluated by end of grade/course tests and interim benchmark scores
Turnover	<ul style="list-style-type: none"> • Teacher turnover has reduced consistency of practices/behavioral expectations.
Unstable	<ul style="list-style-type: none"> • School norms and routines were subject to frequent change. • Systems and structures put in place were reactionary.
Flexible	<ul style="list-style-type: none"> • Not knowing what each day will bring. • Changes in the school schedule results in inconsistent time for planning/instruction.
Temporary	<ul style="list-style-type: none"> • Evolving, changing, unpredictable, flip-flopping, lacking consistency, purpose.
Lack of human capital	<ul style="list-style-type: none"> • Not having mentors to guide their practice. • Lacking colleagues to plan, collaborate, and reflect with.
Lack of material capital	<ul style="list-style-type: none"> • Lack of supplies or lacking awareness of how to acquire resources to support science instruction.

Inductive analysis of interview data revealed that cultural practices such as test scores and compliance were so prevalent they became foundational in constructing an

interpretive model. In addition, the remaining codes were analyzed and condensed into cultural practices entitled: *lack of support: material and human*, and *changing expectations of practice*. Table 4 lists the cultural practices and supporting evidence for each.

Table 4

Cultural Practices Defining “Good” Teacher

Cultural Practices	Evidence
Test Scores	<ul style="list-style-type: none"> • Teaching evaluated by test scores. • Required to present interim assessment data and called to task for poor performance. • Science is portrayed as test scores.
Student compliance	<ul style="list-style-type: none"> • As long as students were quite and teacher did not write students up, they were positioned as “good teachers.”
Teacher compliance	<ul style="list-style-type: none"> • Required to post agenda on board. • Required to post data wall. • Required to post lesson plans. • Certain pedagogies valued over others. • Requirement to attend superficial professional development. • Teachers appease administrator’s demands minimally.

The above cultural practices gave rise to less easily seen structures that contributed to the socially constructed meanings of “good science” or “good teacher.” Identified as surveillance, scrutiny, and control, these structures contributed to the socially constructed meanings of “science teacher” or “good teacher” in the figured world of low-performing, rural schools. Table 5 lists the structures/discourses and evidence

sample used by participants to describe their experiences, thus contributing to the narrow meanings of “good teacher.”

Table 5

Themes Describing Structures and Discourses Giving Rise to Meanings of “Good Teacher”

Structures/Discourses	Evidence
Surveillance	<ul style="list-style-type: none"> • Monitoring student test scores • Monitoring for student and teacher compliance
Scrutiny	<ul style="list-style-type: none"> • Teachers were publically and privately addressed and reprimanded for test scores, student misconduct, and a failure to teach in desired ways.
Control	<ul style="list-style-type: none"> • Submitting lesson plans, posting data walls, expectations of particular instructional practices • Action plans

Introduction to the Interpretive Model

Analysis of teachers’ stories was daunting. As Connelly and Clandinin (1990) stated, “humans are storytelling organisms” (p. 2) and arguably, teachers are master storytellers. Making sense of the interplay between the cultural practices of test scores, compliance, changing expectations and a lack of support which gave rise to the structural meanings of what “good teachers” and how “good teaching” was defined in the figured world of low-performing, rural schools, required an interpretive model to organize the data. The model serves as a framework to describe and discuss the results and is presented in Figure 1.

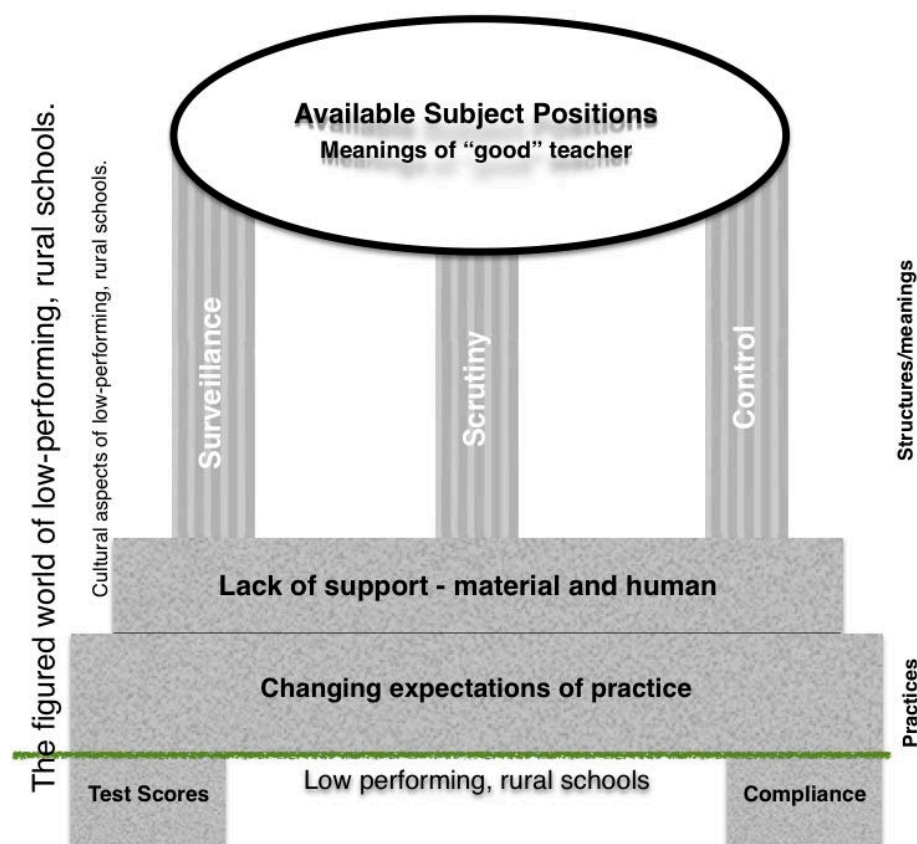


Figure 1. Model Depicting the Construction of Available Subject Positions in the Figured World of Low-performing, Rural Schools.

Addressing the third research question: *In what ways do science teachers author themselves within and against the realities they describe as significant?* and a related question: *What do teachers' stories tell us about their willingness to persist?* I examined teacher narratives primarily from interviews two and three to develop a sense of the meanings teachers made of the institutional structures and practices that narrowly defined how “good science” and “good teaching” were recognized and how those definitions confronted participants. Participants “learned a feel for the game” (Holland et al., 1998, p. 143) and generated dispositions about themselves; when and where they could

challenge or acquiesce; which conversations they could enter into; and the emotions and actions they could display as they claimed recognition from others and themselves for being “good teachers.”

In Table 6, I organize emerging themes and substantiating evidence for structures and meanings that positioned individuals as certain kinds of teachers and how they authored themselves within and against the prevailing positioning forces. Participants were positioned as “good teachers” for producing test scores, complying with the expectations of their administrators, maintaining control over student behavior, and teaching confidently despite a lack of resources in an environment of continuously changing expectations. Participants also positioned themselves through acts of agency by authoring themselves both within and against the widely circulating structures and meanings of “good teacher.”

The meanings and responses of some participants were mundane but significant because they served as examples of ways daily persistence is constructed. For instance, the decision to author within represented an intentional decision to acquiesce in order to persist under challenging working conditions where compliance was celebrated. Interestingly, compliance did little to promote recognizing oneself as a “good teacher” leading to more splendid acts of agency. For example, authoring oneself against the prevailing meanings of “good teacher” entailed being subversive, either overtly or subtly, by contesting the narrowly circulating definitions of “good teachers.”

Table 6

Science Teachers' Positioning and Authoring in the Figured World of Low-performing, Rural Schools

Themes		Evidence
Positioning	Test scores	<ul style="list-style-type: none"> Accumulating good test scores means an individual is recognized as a good teacher.
	Student Behavior	<ul style="list-style-type: none"> Maintaining students' compliance meant an individual was recognized as a good teacher.
	Compliance	<ul style="list-style-type: none"> Attending to the expectations of teacher performance (i.e., data walls, posting agendas, keeping students orderly during movement are indicators of good teaching.
	Changing expectations	<ul style="list-style-type: none"> Participants were recognized as good teachers by maintaining their own compliance and their students' compliance despite the changing expectations of their school administrators. Teachers were recognized as good by remaining unfazed by the shifting nature of behavioral, academic, and procedural expectations.
	Lack of support: Material and human	<ul style="list-style-type: none"> Teachers were recognized as "good teachers" when they maintained orderly classrooms, and taught in celebrated ways despite a lack of material and human support.
Authoring	Within	<ul style="list-style-type: none"> Performing required tasks despite negligible impacts on student learning. Performing activities reinforcing compliance. Performing oneself as a "humble sponge." Constructing a youth depravity model to recognize oneself as a "good teacher."
	Against	<ul style="list-style-type: none"> Electing to disregard expectations of performance in spite of the negative consequences. Electing to perform themselves in ways that are not widely circulated. Broadening narrow definitions of "science teacher" or "good teacher" by devaluing compliance and test scores replacing them with enthusiasm for learning, relationships with students, and promoting application/relevance of content as indicators of "good teaching."

Teacher narratives revealed ways opportunities were leveraged to author themselves distinctly from the recognized positions available in a figured world. Rather than accepting indicators of sound science teaching to be student compliance and test scores, teachers found that when their practices contributed to authentic student engagement or developing affiliations between student lives and science content, alternative teaching practices were substantiated and reinforced. Similarly, as teachers described their divergence from the curriculum and pacing guides by abandoning the drill and kill, fact-based instructional models promoted in the schools, their affiliation for teaching increased. Finally, as teachers resisted cultural models that suggested they remain separate from their students by maintaining a relational distance from their students, affiliations toward teaching and their existence in the cultural model of hard-to-staff schools increased. Consequently, authoring themselves against the widely circulated meanings of “good teacher” increased their affiliation toward their placement and their role in it increased. It was through the enactment of agency that participants constructed alternative meanings of what valued practices *should/could* be associated with teaching science to students in low-performing rural schools teachers that thickened their affiliation toward teaching and contributed to their day-to-day persistence.

Validity

Concerns with validity plague all research and issues of validity in narrative inquiry deserve special attention. In this section I will address validity as it pertains to the participants and interpretation of their stories.

Holland et al. (1998) describe the interpretation of social discourses by stating:

No matter what one person says to another, there is always more to the message than its semantic content. How the message is said—through accent, tone, or tempo, what language or dialect it is said in, what style (formal or informal), what mode (whether phrased as a question or command)—all these index the relationship among speaker, addressee, and audience and constitute signs of the speaker's claim to social position. (pp. 11–12)

Therefore, it is through this statement that I frame the argument of validity for the study.

The narrative researcher acknowledges the tellers of stories are selective in the meanings they generate, which depends on the audience from whom their stories are intended. For instance, Riessman (2008) urges the researcher to appreciate the *dialogic/performance* nature of participant interviews highlighting “‘who’ an utterance may be directed to, ‘when,’ and ‘why,’ that is, for what purposes?” (p. 105). Denzin (1989) claims,

[T]he meanings of these experiences are best given by the persons who experience them; thus, a preoccupation with method, validation, reliability, generalizability, and theoretical relevance of the biographical method must be set aside in favor of a concern for meaning and interpretation. (as cited in Creswell, 2007, p. 214)

It is not the primary aim of the researcher to discover whether the narrators' stories represent an accurate account of lived events; rather, the researcher's role is to understand the meanings people attach to specific events (Polkinghorne, 2007). Instead, “the urge of storytelling arises from the need and desire to have *others* hear one's story” (Chase, 2011, p. 427) and what an interviewee says (or withholds) during an interview is representative of their perception of their social world (Czarniawska, 2004).

In discussing the validity of analysis conducted during narrative research, the appearance of truth is a product of the heavy reliance on narrators' accounts.

Researchers' interpretations must be substantiated by extended narrative productions collected during data collection "to cogently argue that theirs is a viable interpretation grounded in the assembled texts" (Polkinghorne, 2007, p. 484) or use extensive narrative data to "rule out *specific* plausible alternatives . . . to [one's] interpretations" (Maxwell, 2005, p. 107).

Conducting multiple interviews of participants served as a tool for validating participants' stories by checking for agreement in subject and tone thus contributing to the validity of participants' experience (Seidman, 2006). However, stories that "diverge from established 'truth' can sometimes be the most interesting, indicating silenced voices and subjugated knowledge" (Riessman, 2008, p. 186). Regardless, I remain cognizant of the stories being produced, who is producing them, under what circumstances they get produced, how they gain acceptance, and how they are challenged (Gubrium & Holstein, 2009).

The goal of narrative research is to provide thick descriptions of participant's experience to "reveal[s] the historical, processual, and interactional features of the experience" (Creswell, 2007, p. 214) promoted when "narrative researchers work closely with individuals and their stories" (Chase, 2011, p. 423). As I have described previously, the relationship I maintained with participants has developed over the course of many months, or in some cases, years; thereby satisfying Creswell's (2007) and Chase's (2011) requirements for rigorous narrative inquiry. Further, a prior understanding of the

phenomena (Creswell, 2007) serves as a standard to evaluate both the quality and validity of narratives and contributed to what Denzin and Lincoln (1998) calls “criteria of interpretation” (p. 214). Since my experience with participants precede and extend beyond the data collection and analysis phases of this study, the criteria established for sound and just interpretations by the researcher are substantiated.

Summary

In this chapter I explained my research methodology, the selection criteria for research sites and participants, provided overview descriptions of the participants, as well as described a procedure for data analysis. In the following chapters I present these data in a way that best illustrates one’s journey into teaching, their experiences teaching science in hard-to-staff schools, and the ways they authored themselves to construct their persistence. In Chapter IV, I present data supporting reasons individuals described for deciding to teach. In Chapter V I present teachers’ stories representing the structures and associated meanings guiding their practice in hard-to-staff schools. Finally, in Chapter VI, I present evidence from narratives that illustrate a number of possible responses and how their responses contribute to their willingness to persist.

CHAPTER IV

EXPERIENCES THAT LED INDIVIDUALS TO TEACH IN HARD-TO-STAFF SCHOOLS

Overview

In this chapter, I focus on the narratives emerging from the first of three interviews where participants shared stories that influenced their decision to teach in a specific type of hard-to-staff school—the low-performing, rural school. I asked teachers to describe their experiences that led them to pursue a career in education and specifically to take teaching jobs in hard-to-staff schools to answer Research Question #1: *What are the stories teachers tell about their decisions to teach in low-performing, rural schools?*

Teachers eagerly shared stories that influenced their decision to teach and spoke of their parents, prominent community members, or experiences they had with school aged children prior to pursuing teaching as influential to their pathways to placement. Additionally, teachers spoke of their own experiences in school, comparing theirs to the experiences they had seen other students encounter in schools as encouragement to their desire to give back or work to help improve the unfortunate circumstances they saw others experience. Conceptually, teachers' stories represent the ways they defined themselves as teachers as well as describing resources they drew upon to recognize themselves as "good teachers."

Teacher's stories revealed three themes: (a) teaching for social justice/giving back; (b) identification with an emotional connection with teaching that I describe as an

affective theme; and (c) teaching as status. To guide the reader, I have listed each participant and the themes that emerged from their stories in Table 7, which is followed by a more detailed description of each theme with evidence from participant interviews.

Table 7

Participant Affiliation with Themes Describing Their Motivation to Teach

	Social Justice/Giving Back	Affective	Teaching as Status
Teena	X		
Lydia	X	X	X
Donnasue	X	X	
Meegan	X	X	
Anne	X	X	
Phyllis	X		
Kyla			X
Carol			X
Lori	X		

Teaching to Promote Social Justice/Give Back

In describing their desire to become teachers in hard-to-staff schools, seven participants described a social justice and/or giving back positions in their stories. I have elected to analyze these themes together because distinguishing them would do an injustice to participants' entire narrative. I characterize the social justice/giving back position upon three criteria: (a) acknowledgement of the persistent achievement gap between subgroups of students; (b) first-hand experience with students who have been

disadvantaged by an inequitable experience in schools; and (c) acknowledging the experiences of students as problematic and identifying themselves as potential solutions. Thus, teachers characterized by this position expressed all three criteria to be considered for this classification. These criteria are consistent with Linda Darling-Hammond's (2002b) characteristics of teaching for social justice as having a "personal experience with issues of inequity, discrimination, and oppression that are regularly experienced by students whose race, income, language, sexuality, or learning ability place them outside the mainstream" (p. 2). Further, Darling-Hammond argues that those who teach to promote social justice recognize *and* challenge the "conservative forces in education—that is viewpoints that conserve an inequitable status quo because it is seen as unproblematic, as 'just the way things are'" (p. 2).

Teena and Lori both drew from their experiences as students to acknowledge the persistent achievement gap between subgroups of students. Specifically, each described the relation between socioeconomics and the varying degrees of privilege they experienced as students:

Seeing the gap between high socioeconomic status—people that had that opportunity, and then the people from my hometown, who did not necessarily get those opportunities. This made me aware of my own privileges as a student because that could have been me. That's when I—coupled with the whole experience of seeing and comparing where my friends from my hometown had been and the opportunities I had and the difference of where we were in our lives, I think those two things kind of combined together to get me to pursue a teaching career (Teena, Interview I, 12/6/12).

I attended a Title I elementary school as a child and we definitely stood out. We didn't have a lot of books so we would share everything all the time—paper—that was always interesting. My parents actually paid for my fifth-grade class to go on a field trip because we never would've gone. My mom said 'the only reason

you're not going is because they can't pay for the bus and they said okay, we'll pay for the bus'—problem solved—we're going. We didn't always have teachers, but the good ones stayed. Mr. McDowell, my fourth-grade math teacher was always there. My middle school was a little bit better because they were busing kids in from the beach. My high school was huge and contained several high schools under one roof but I just remember all of the craziness with people running down hallways and there being constant interruptions. (Lori, Interview I, 12/6/12)

Teena and Lori experienced the inequities that students of low-socioeconomic status face in hard-to-staff schools. Teena's statement, "that could have been me" (40), reflects her recognition of gaps associated with socioeconomic status and the privileges afforded to her. Consequently, she used these gaps to explain the differences in opportunities between her experiences and those of her friends. Similarly, Lori recognized that the school she attended was unable to provide adequate funding for books, buses, and paper, which was very different from "all my friends [who] went to private school" (200). Moreover, Lori's statement, "we didn't always have teachers, but the good ones stayed" (207) reveals that she is not only familiar with the challenges of staffing Title I schools, but she identifies "good teachers" with the ones who stayed.

Other participants whose stories reflected social justice positions became aware of the disparities in outcomes of education through vicarious experiences of underserved students. For example, Anne and Donnasue spoke of their desire to teach for social justice following experiences they had in college.

It was a very different group of kids, very different experience than what I had [as a student] . . . I got to see . . . underprivileged kids doing science and that was like look at these kids who society writes off . . . look at all they are doing right now. (Anne, Interview I, 12/7/12)

I had no idea the things that they went through . . . The kids have a lot more to deal with in terms of their emotional background and their home life, but they all want the same things, they want to succeed, they all want to feel loved and have fun . . . I especially enjoy working with the kids who might not have the support and that's where I can come in and not only be their school teacher, but also someone who they knows cares about them . . . they might not have that many people in their life . . . I wanted to be a teacher, but I wanted to be a teacher where I thought it would really matter. (Donnasue, Interview I, 1/16/13)

While interning at an inner-city magnet school in Cleveland, Anne concluded the students she was working with were “very different” and was impressed by the fact that “kids who society writes off” are “doing science” in unexpected ways. This experience contributed to her social justice position and commitment to teach in a hard-to-staff school.

Similarly, Donnasue's description of her experience as a camp counselor “for low-income children in Baltimore city” (1346) contributed to her commitment to pursue a career teaching in a hard-to-staff school. Enthusiastically smiling, she described, “I loved it, it was a life changing summer” (1347), which contributed to her desire to “teach where it would really matter” (1351).

Meegan's experiences of the inequities experienced by disadvantaged students were both personal and vicarious. She described attending a program as an undergraduate student focusing on “six or seven social justice issues [organized] in a student union” (397). Continuing, she described the topics as “current and relevant and kind of sexy at the moment” (400), so she engaged in each station for 30–45 minutes and viewed only images of pertinent social justice issues. She recalled, “So one of the rooms in there was ‘Education’ and I remember that affecting me . . . little nuggets here and

there, like all adding to it. It worked” (413). Influenced by the images depicting the inequities found in our nation’s schools, Meegan began to strongly consider a career in education.

However, it is unreasonable to think a single experience motivated Meegan to pursue a career in education. Rather, Meegan shared an experience when she was working “in the worst school of the four counties” (423) as a volunteer to support a childhood obesity program. She recalled realizing how much they had struggled in school, what they had to do without, and the kinds of conditions they were expected to learn in.

It just doesn’t seem fair. I know I grew up feeling very unwanted and uncared for, and I can only imagine how kids that come from a single parent home or a home where they have to take care of their brothers and sisters like I had to take care of my brothers, it doesn’t feel good. And . . . on top of all the other crap that’s going on in your life, that you have to go to a school that isn’t even good. It’s just like how many bad cards are you gonna be dealt? (Interview I, 12/5/12)

Meegan described two significant experiences that contributed to her social justice position (attending a program highlighting social injustice and feeling unwanted), giving rise to a desire to challenge the inequities experienced by students of poverty in school. Reading the conditions students in hard-to-staff schools face as problematic and identifying herself a possible solution, led her to conclude, “I think wanting to work with the low-income children or kids from the bad areas, a lot of it’s more like an emotional tie to them” (437). Meegan continued:

For me the connection to teaching in schools like this is so much more about the emotional connection and about what humans deserve. These humans deserve

just as much as anyone else in this nation. . . . I get mad because I feel like they deserve so much more than me because I'm new and I am not as good as I could be. And so I get mad that like, 'Why aren't there better people in here than me because they're such good kids and they deserve so much more than me?' (Interview I, 12/5/12)

Meegan's experiences produced a desire to alter her students' experiences in school, which exemplifies the social justice position described here. Although she understood her role in disrupting the inequities depicting social justice issues related to education, she accepted her limitations based upon her experience.

Similarly, Lori's commitment to teach for social justice was influenced by her experience observing in an inner-city school during her formal teacher preparation program. Lori's narrative captures an acknowledgement of an achievement gap resulting from students who are denied access to an optimal learning environment. In addition, she describes her desire to disrupt the inequities experienced by students attending hard-to-staff schools.

My freshman year of college I took an Intro to Education class . . . For that class I went to a ridiculously, crazy school in urban Jacksonville, Florida. There were drug dealers walking in and out of the building. The principal had a chair thrown at him; it was ridiculous. All the kids wanted was to learn; that's all they wanted, but they kept getting interrupted every five seconds by ridiculousness. For example, parents would just knock on the doors and come into classrooms distracting everyone. Then students seemed to be doing worksheets forever. In my head it was like—if you teach in a low-performing school that means you make copies of worksheets. To be successful they (students) fill in the blanks [to prove] they know [the content]. They take the test and they fail because they don't know how to apply—they can just fill in the worksheet. That's when I decided to change my major because I wanted to be different. I don't want to keep perpetuating a system that's broke (Interview I, 12/6/12).

Many of the participants whose desire to teach stemmed from social justice positions also expressed a desire to “give back.” Those who expressed a desire to give back spoke specifically of their desire to help others and pass along the affordances that resulted from their education. For instance, unlike Lori, Meegan and Teena, Lydia, and Phyllis lacked personal or vicarious experiences with underserved students attending hard-to-staff schools and only became aware of persistent achievements gaps after becoming involved in Teach for America (TfA). For instance, Phyllis described her pathway to teaching in a hard-to-staff school by stating:

I bought into TfA because of these underprivileged kids and I wanted to give back—or I don’t know. I have always had that mindset about life in general. I worked at a nonprofit homeless charity and had opportunities to intern at other locations, but I found myself drawn to helping others. I have always had the mindset of helping those who haven’t had it as good as I have. So when I heard about TfA I was like ‘Okay, here’s someone else that needs help.’ (Interview I, 12/7/12)

Although Phyllis had difficulty identifying a singular moment that inspired her to become a teacher, her decision to join TfA was validated after learning of the inequities of facing “underprivileged kids” which matched her enduring desire to help others “who haven’t had it as good as I have” (193).

Similarly, Lydia struggled to identify the moment when she decided to pursue a career in teaching by stating, “[Y]ou put me on the spot. I was a barista . . . I was a lifeguard . . . I did teen court . . . I was a tutor” (Interview I, 12/7/12). I asked if tutoring students impacted her decision to go into teaching and surprisingly, she responded “No,

not really” (414). However, Lydia agreed that the collective experience of working to help others in service-oriented jobs contributed to her decision to teach.

Four participants expressed both a social justice position and a giving back position when describing their motivation to teach in hard-to-staff schools. For instance, Anne described: “Teaching kind of goes hand-in-hand with giving back. I had a really good education. I know it’s cheesy, but I bought into the whole idea that these kids deserve one too” (Interview I, 12/7/12). Similarly, Teena attributed her claim to the giving back position to her upbringing by stating, “The way I was raised by my parents was to give back” (Interview I, 12/6/12). Collectively, participant’s experiences led them to pursue teaching careers in hard-to-staff schools to achieve their individual professional goals of giving back.

According to Sleeter and Stillman (2007), teachers have a “strong belief in the hope and possibility of public education” (p. 14). Participants motivated by a desire to give back chose to do so in ways that involved education to provide for others. Conceptually, teachers’ desire to feel as though they were giving back and helping others suggested resources they drew from to identify themselves as “good teachers.”

Having first-hand or vicarious knowledge of educational inequities plaguing students in hard-to-staff schools motivated individuals to become teachers to be agents of change to disrupt these inequities. Teachers described these as influential to their decision to pursue teaching careers in hard-to-staff schools and contributed to their moment-to-moment persistence. This aspect of persistence is consistent with findings from studies of teacher retention. For example, in her book *What keeps teachers going?*

(2003), Sonia Nieto described teachers' commitment to democracy and desire to promote social justice as key elements that help teachers persist. Similarly, engagement in activism and commitment to marginalized youth to further social justice are significant aspects of teacher resilience (see Howard, 2003; Lyons, 2004).

Affective Reasons for Teaching

Teachers also described affective reasons for pursuing a career in teaching which is consistent with Cochran-Smith's (2004) claim that the "emotional, relational, and personal" (p. 388) aspects of teaching often draw individuals to teach. The affective theme captures each of these aspects as participants spoke of the joy and excitement each experienced when working with others.

Meegan was undecided about her career as a college student and analyzed many options prior to pursuing a career in education. However, having worked with underclassmen at her university, it became clear to her that a service-oriented career might provide her the same satisfaction as helping her younger siblings in school. For example she stated, "I've always derived a lot of happiness and pleasure in helping other people. I find strength in it and I definitely feel purposeful and it re-energizes me" (Interview I, 12/5/12). Her story reveals the relational and emotional aspects she associated with teaching.

Similarly, recall Anne's story about receiving a sound education, noticed while volunteering in an inner-city school that other students had not received the same experience. Drawing on these experiences, she expressed relational and personal reasons for pursuing a career teaching science in a hard-to-staff school by stating, "I wanted to be

that teacher who changes that tough kid. You know be the one that turns them around” (Interview I, 12/7/12).

Likewise, Phyllis stated, “I wanted to be that teacher that made everyone love learning and made everyone excited to come to class” (Interview I, 12/7/12) revealing the relational and emotional aspects she associated with teaching. Lydia also articulated an affective position that was grounded in the relational, emotional and personal aspects she associated with teaching by stating:

Growing up in a family with two older brothers, I was always teaching them something or making them do something because it was going to be fun. I remember playing with my friends and of course, I was always the leader. I would choreograph dances. I always had this need to teach or lead people. I guess I could say that I don’t feel I’m doing anything worthwhile unless it’s helping someone else. (Interview I, 12/7/12).

When I asked Lydia to speak about the teacher she wanted to be, she provided a response that further demonstrated the relational aspects she associated with teaching. For example “Of course, I wanted to be the teacher that everyone loved. I wanted to be the one who did all of the fun experiments until I realized I had little to work with” (Interview I, 12/7/12).

Teachers described their desire to teach in terms of making learning science fun, to be liked by their students, to turn kids around, and to be perceived as leaders. Four of the nine participants expressed relational, emotional and personal aspects of teaching leading to the production of an affective theme. Conceptually, these aspects of teaching represented ways that they identified their work to be impactful to students and their own identities as “good teachers.”

Teaching as Status

Participants also described how they had come to associate teaching with social status. Significant in their stories were the ways family members and other prominent figures in their community, revered teachers. For instance, Carol, the most senior of the study participants, vividly described how her father and church members regarded teachers by stating:

Growing up we went to church and most of the adults in the church community were teachers and they happened to be my teachers—they were the big shots of the town. My father—a self-employed plumber always had this thing for teachers and he always said to me ‘I want my baby girl to be a teacher.’ I also had very good teachers, and they inspired me, and I felt well cared for by my teachers. I just remember saying, ‘This is what my dad wanted for me so that’s what I’m going to do.’ (Interview I, 1/31/13)

Carol’s decision to teach was influenced by the closeness she felt with her teachers.

Feeling “well cared for” by her teachers and seeing them take prominent roles in the church community contributed to her view of teachers as “big shots of the town.”

Further, her father’s desire that his “baby girl . . . be a teacher” contributed to her decision to pursue a career in education. Conceptually, Carol’s narrative suggests that becoming a “good teacher” would be validated by respect from her students and respect from her colleagues and larger community.

Similarly, Kyla described one origin of her desire to teach:

I had good teachers when I was young. Most of my relatives were teachers and I saw them as leaders on the community and providing a lot of outreach—doing stuff for the community. But it wasn’t until I had a chemistry teacher suggest, ‘Why don’t you try teaching’? Teaching is a very important profession; you are well respected by the community and by the church. As a teacher, you are

somebody people look up to. It is one thing that I do best in my life. (Interview I, 1/31/13)

As a youth in the Philippines, Kyla appreciated how her teachers were substantially involved in her community, provided for others and commanded admiration of others. Consequently, Kyla was persuaded by her experiences to follow a similar pathway into education and also provided a framework for her to construct a similar identity as a teacher.

Lydia's desire to teach was shaped, in part, by her mother's experiences as a career educator who often shared stories about being a kindergarten teacher. Although Lydia's story of how she arrived in teaching often lacked the certainty of others, she did claim that a career in teaching always smoldered. Referring to the influence of her mother on her career decision she stated, "She never told me what I needed to do, but she always had this idea that I would be a teacher. I always wanted to be a teacher" (Interview I, 12/7/12).

Summary

The literature on teacher retention claims that individuals enter teaching for mostly altruistic reasons—they love children and learning, they conceive of a world that is a better and more just place, and they want to provide opportunities for all children to have the chance to live and work productively in a democratic society (Cochran-Smith, 2004). In fact, "altruism and a desire to work with children are the primary reasons people enter teaching. This message is clear enough that no more research to establish this fact is needed" (Brookhart & Freeman, 1992, p. 55). The stories presented here

reinforce this conclusion. However, altruism and a love of children and learning are seldom enough to sustain teachers who find themselves teaching in extraordinarily challenging placements, like the research sites featured here. Nieto (2003) asks, why do some teachers “persevere, in spite of all of the deprivations and challenges” (p. 7) found in schools serving students from “racially, culturally and linguistically diverse backgrounds” (p. xi) while others chose to leave after one, three, or five years? I contend that the stories individuals tell about the reasons they decided to teach become resources from which they draw to author themselves as “good teachers.”

Teachers’ motivation to pursue careers in education provides insight into the visions they had of themselves as professionals. Consequently, the kinds of teachers they intended to be was influenced by their experiences and histories with school. For instance, teachers who entered teaching to promote social justice would achieve their goal of being a “good teacher” by disrupting the inequities that plagued socioeconomically disadvantaged students. Doing so ranged from simply electing to teach in a hard-to-staff school to challenging a system that historically marginalized and underserved children. Those pursuing a desire to give back sought to provide all students with the same sound and rigorous education they themselves had received as students. Participants who pursued teaching for the affective rewards gained standing by being liked by their students, enjoyed teaching with enthusiasm, and contributed to students’ excitement for science. And finally, individuals who spoke of the status associated with teaching, pursued teaching to position themselves prominently in the community and

envisioned their influence to extend beyond the walls of the school and taught to gain respect from a larger community.

Conceptually, the career aspirations described by participants represented goals that contributed to one's commitment to teaching. If these goals could be attained, there was little doubt they would persist. However, recognizing oneself as a "good teacher" and being recognized as a "good teacher" were seldom aligned, especially for early career teachers. For instance, administrators, district personnel, colleagues and students contributed to the meanings of "good teacher" that conflicted with participants' personal visions of "good teacher." In the following chapter, I describe the institutional meanings of "good teachers," promoted by norms and practices in the schools that teachers navigated in their everyday professional lives.

CHAPTER V

PORTRAIT OF THE “GOOD TEACHER” IN RURAL, LOW-PERFORMING SCHOOLS

Overview

It was pretty much the complete opposite of everything that I imagined doing . . . So when I went in to my classroom, it was just mad chaos, nothing was going as planned. No one was listening. No one gave two shits about what I was saying. It was a long day. This is ridiculous. And I remember thinking back to being a lifeguard, and it was just constantly being like, a wave would hit me, and I would just get knocked down, and then I just remember being swept back up and knocked down again. And I was just like, ‘How do I break out of this because this is terrible? And just like going back to that helpless feeling, like, ‘I don’t know what else to do.’ (Lydia, Interview I, 12/7/12)

Lydia’s description of conditions she faced in her placement was jarring and typical of the stories other early career teachers told. The narratives provided by teachers portray a barrier to achieving their personal visions of teaching. In addition, teachers’ narratives of the school culture suggest reasons why students were reluctant or unwilling to engage in learning. Holland and her colleagues (1998) define culture as “common conventions [and] shared organizing themes” (p. 15) responsible for “reshaping the values and lifestyles of participants” (p. 16). Similarly, Peterson and Deal (2002), who have written extensively about the ways school culture impacts the climate and overall health of schools, describe culture as follows:

Culture exists in the deeper elements of a school: the unwritten rules and assumptions, the combination of rituals and traditions, the array of symbols and

artifacts, the special language and phrasing that staff and students use, and the expectations for change and learning that saturate the school's world. (p. 10)

It came as little surprise that the culture and climate found in the research sites was initially upsetting to the participants. It has been well documented that high rates of turnover are attributed to poor working conditions (Ingersoll, 2001) and are commonly found in schools enrolling minority and low-income students (Borman & Dowling, 2008; Boyd et al., 2011; Ladd, 2009, 2011; Loeb et al., 2005). However, Johnson et al. (2011) conclude that “the seeming relationship between student demographics and teacher turnover is driven, not by teachers’ responses to their students, but by the conditions in which they must teach and their students are obliged to learn” (p. 4).

The purpose of this chapter is to answer research Question #2: *How do science teachers in low-performing, rural schools story their realities and how do these realities influence their teaching?* To aid in examining teachers’ narratives, I focused on three sub-questions: (a) *what subject positions are made available*; (b) *what actors are significant*; and (c) *what artifacts and discourses mediate teacher’s stories?* These questions help to better reveal the routines, practices, and unwritten rules that make up the culture of the low-performing, rural school in order to understand the cultural meaning of “good teacher.” Guided by the interpretive model described in Chapter III, Figure 1, I frame the discussion of data to illuminate the pervasive practices of test scores, compliance, changing expectations, and lack of resources contributing to structures of surveillance scrutiny and control that give rise to the narrow cultural meanings of “good teacher” in the figured world of low-performing, rural schools.

Teachers' narratives portrayed narrow meanings of "good teacher" promoted by everyday practices in their settings. Teachers whose students performed well on tests (see lower left side of Figure 2) and sat quietly and/or complied with school rules (Compliance, see bottom right side of Figure 2) were lauded as the good teachers in the school. Not surprisingly, promoting students' meaningful engagement and learning through creative instruction were not as important as test scores and compliance in teachers' positioning. Test scores and compliance were dominant practices in promoting these narrow meanings of "good teacher," representing a stark difference between the teachers' visions of "good teacher" discussed in Chapter IV.

Although the narratives presented here are lengthy, including them in near-raw form was a purposeful choice to privilege teachers' stories and also to illustrate the relationship I maintained with each of the participants.

Test Scores

In this section, I discuss the primacy of test scores in teachers' narratives. Their experiences illustrate clearly the ways that test scores became mechanisms for surveillance, scrutiny and control (See Figure 2, columns) that gave rise to very narrow available subject positions (See Figure 2, top of the model). I will then discuss compliance (right bottom of Figure 2), changing expectations, and lack of support (middle of Figure 2) in future sections.

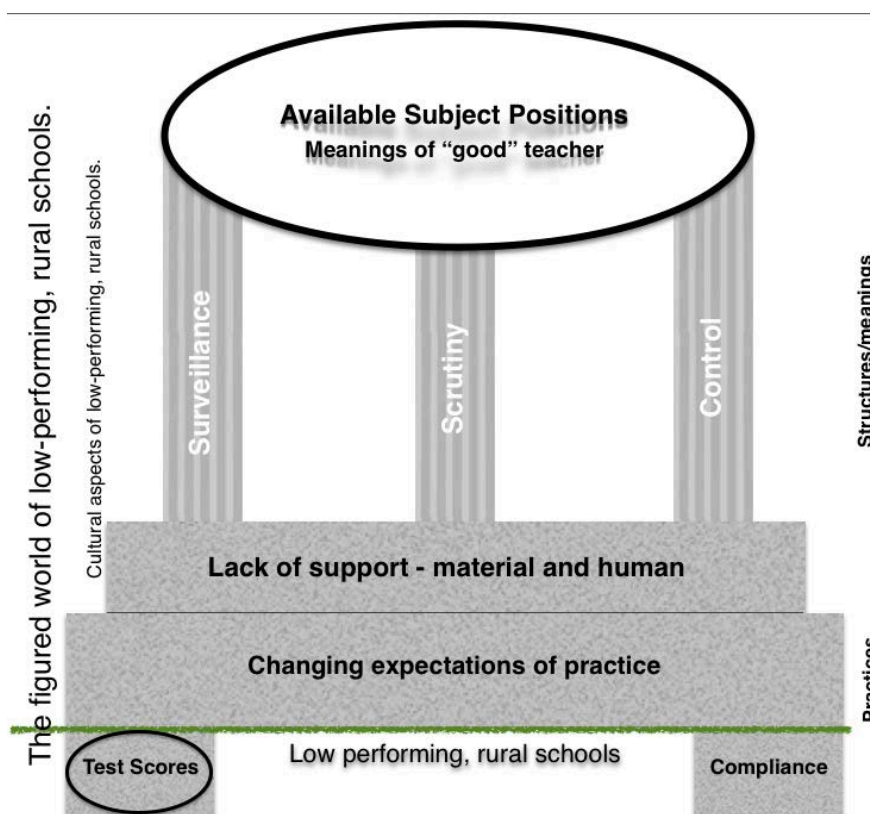


Figure 2. Interpretive Model Depicting Test Scores as Cultural Practices Used to Distinguish “Good Teachers.”

Certain institutional norms and practices imply certain meanings of “good teacher.” My experiences as an instructional coach in low-performing schools contributed to my assumption that test scores would represent an everyday practice used to distinguish “good teachers” and the data confirmed an inextricable connection between test scores and the narrow meanings of “good science teacher.” For instance, student performance on high stakes tests and frequently administered benchmark assessments contributed to defining what “good teachers” did and how “good science teachers” were recognized. Teena provided an example by stating, “[T]hey [school administrators] send a very clear message. These [test scores] are our priorities because that is what the state

cares about and we will focus on this only” (1105). Additionally, Teena shared that test scores also represented “science” by stating, “Science is envisioned as if you get 80 percent of your students to pass the test, they know science” (Teena, 2688). School “science” and the artifacts of “good science teaching” in the figured world were reduced to a numerical value generated from annual and periodic assessments.

In the following sections I describe how test scores were mechanisms of surveillance, scrutiny and control; were viewed by participants as flawed; and how test scores took on broader meanings used to determine how instructional time and instructional resources were allocated.

Test Scores as Mechanisms for Surveillance, Scrutiny, and Control

Teachers were subjected to surveillance, scrutiny and control based on student test scores on annual assessments and periodic benchmark tests. The data produced from these assessments contributed to the narrow definitions of “good teacher” by serving as barometers for administrators and district officials to monitor, scrutinize, and exert control over teacher’s practice. For example, teachers described how fitting into the cultural model of “good teacher” resulted from surveillance of test results, scrutiny of their teaching practices, and increased control over their instruction. Lydia provided an example of how the surveillance and scrutiny she received from her principal contributed to the narrow meanings of “good teacher” by stating:

Patrick: And then you had a principal who said, ‘Based on the data, you’re not doing much right.’

Lydia: Yes.

Patrick: Did you have much of a chance to try a lot of different strategies?

Lydia: No. No. Last year, not really because it was either if you tried it once and it went terrible and she [principal] heard about it—because she wasn't gonna come to your room—if she heard about it, you couldn't do it. If you tried it once . . . and everything looks chaotic . . . that would get shot down.

Patrick: What do you mean it would get shot down?

Lydia: Just, 'Why aren't you doing this [a preferred strategy]?' (Interview II, 12/14/12)

Identification as a “good teacher” depended primarily on test scores. If scores on benchmark tests were acceptable, teachers avoided scrutiny. However, if teacher's scores were unsatisfactory, they were subject to additional scrutiny and control through requirements to implement preferred practices (i.e., graphic organizers, tickets out of the door, or posting curriculum standards on their boards) by action plans developed by administrators.

Phyllis reflected on the ways teachers were positioned based upon test scores by stating, “If I didn't perform above everybody else, I was gonna be in trouble for it or something—you're put on an action plan” (Phyllis, 1877). Actions plans represented a mechanism of control of teacher's practice. Similarly, Teena described the scrutiny and control she witnessed among her peers in response to test scores by stating:

The only two teachers I heard that were put on action plans were core teachers that had exams that didn't produce results during their first semester. I felt that other teachers [non-tested] had things going on in their classrooms that were completely unacceptable, but because no one was holding them accountable for those things, they weren't reprimanded the same way that the teacher was that was core. (Interview II, 2/16/13)

“Producing results” represented primary evaluative markers to distinguish “good teachers.” “Core” teachers were subject to the brunt of the scrutiny resulting in a crisis of confidence for early career teachers. For example, Lydia responded to the ways her test scores positioned her as a teacher by stating, “I knew I could do better. I was already at the bottom” (1062).

Surveillance and scrutiny associated with test scores impacted teacher’s self-efficacy and job satisfaction. Prior to teaching, Lydia had been accustomed to academic success and performed herself confidently in leadership positions. However, following the scrutiny associated with her students’ performance on interim tests, she was unable to fit into the cultural model of “good teacher,” which had negative implications for her willingness to persist. For example, Lydia shared a self-assessment of her teaching through tears: “I didn’t feel as though I was doing anything, but I knew I was there for a reason. I would get up in the morning and I didn’t want to go to school because I hated it. Dammit” (Lydia, 739).

Questionable assessments. Although benchmark assessments were used to distinguish “good teachers,” their internal flaws resulted in skepticism and caused teachers to question the validity of their results.¹ Considering the value placed on benchmark test scores, one would expect interim assessments to provide meaningful

¹ It was common practice in low-performing, rural school districts for central office staff to construct assessments drawn from a bank of test items. Central office staff designed the assessments based upon the most current pacing guide that influenced what science content from the state standards was taught at several points in the year. However, many of the items were found to contain content errors, grammatical errors, and clerical errors, which resulted in grading errors. Additionally, since many pacing guides circulated through the school district, the pacing guide used to construct the test and the pacing guide used by teachers regularly did not match.

formative data to teachers and inform instruction. However, Phyllis questioned the accuracy of the assessment items by recalling, “I walked around and looked at the test questions, and I’m not sure they are really accurate” (3217). Similarly, Donnasue questioned the validity of internal benchmarks by stating, “[N]one of those words were even in the breakdown [the unpacked standards] so I was really surprised to see those words” (4246). Regardless of teacher’s suspicion of interim assessment data, the narrowly conceived meanings of “good teacher” were predicated on their results.

Test scores at gatekeeping mechanisms. Test scores impacted both teachers and students. Not only were test scores used to distinguish “good teachers,” but they were also used to identify which students would receive instructional interventions and which students would be passed over. For example Phyllis shared, “[T]hey [administrators] literally told me, ‘We teach to the bubble kids and we leave the ones on the bottom, alone.’ That really bothered me” (808). “Bubble kids” was a term often used in low-performing, rural schools to describe students who, by virtue of the past performance on standardized tests, are predicted to fall just short of being “proficient” (scoring Level III or above on End-of Grade tests). Teaching “bubble kids” maximizes a teacher’s chance to get students to a level of proficiency considered passing while increasing a teacher’s effectiveness and a school’s rating in the statewide accountability model. Individuals who pursued careers in education to give back or teach for social justice found the usage of data to exclude students to be jarring. The unfortunate consequence of this model troubled Phyllis because students above and below the bubble were ignored, which threatened her personal vision to give back to historically

underserved students. Consequently, her personal vision of “good teacher” and the cultural model of “good teacher” were misaligned.

Test scores were also practices used to determine what would be taught, how much time was allocated for instruction, and what materials were available to teach science. For example, Anne observed, “because sixth grade science is not tested, it gets the back burner and there have not been a ton of resources provided by the school so that hands-on happen” (1039). She continued, “[A] lot of times I don’t do science because it is not tested—the district would rather I remediate math or reading” (1425). Recall Anne’s experience that motivated her to pursue teaching historically underserved students, “I got to see . . . underprivileged kids doing science and that was like look at these kids who society writes off” (Interview I, 12/7/12). However, what counted as “good teaching” in her placement resulted in the marginalization of students learning sixth grade science and represented a conflict with her original reason for deciding to teach in a hard-to-staff school.

Similarly, test scores gave rise to control over what and whom teachers could remediate. For example Lydia described how she was denied the opportunity to provide remediation for her students by stating, “[I was] specifically told I could not remediate science . . . I’m not allowed to remediate science. I can only remediate English” (1764).²

Scrutiny, surveillance, and control, were not evenly distributed among science teachers. For instance, early career teachers who did not teach tested areas made few

² Despite the fact that eighth-grade science was tested, the school administrators in Lydia’s placement were attentive to the previous year’s poor test scores in Reading and Math and mandated remediation only occur in these subject areas.

references to surveillance, scrutiny, or control associated with test scores in their narratives. For instance, Meegan described the freedom and isolation she attributed to not teaching a tested subject by stating, “[T]here is no pacing guide, no direction, nothing from the administration, it’s not mentioned at all.” (2655). Meegan’s recollection of her first semester lacked the same evidence of surveillance and scrutiny others associated with their tested subject areas. In fact she felt “ignored and unsupported” (Interview II, 1/16/13) which she attributed to her teaching assignment. Interestingly, Meegan weighed the options of receiving support in exchange for autonomy by claiming, “I would absolutely pick having no support if it meant getting to have the freedom that I have” (2730). Meegan’s counter claim exemplifies the degree to which surveillance and scrutiny contributed to the construction of narrowly defined subject position of “good teachers” in low-performing schools because her conclusions were based on the experiences she witnessed her colleagues encounter.

Test scores influenced what to teach, whom to teach, and what resources would be made available to teach. Together, test scores and the subject positions produced by them, figured prominently in teacher’s job satisfaction and willingness to persist. Interestingly however, not all teachers faced the same scrutiny. For example Anne noted the apparent double-standard that existed for teachers that taught tested grade levels and content areas: “the core grade level teachers have a different set of responsibilities and much more—it is just kind of like this divide” (1574).

Spanning boundaries: Teachers who taught both tested and non-tested subjects and grade levels. An intentional design of this study was to solicit teachers

who had a variety of teaching experiences and assignments. While I have spoken of subject positions/cultural models available to teachers who taught tested subject areas, I deliberately call attention to teachers who taught *both* tested and non-tested subject areas because their stories illustrate the ways teachers are subject to different degrees of scrutiny, surveillance and control, allowing some teachers to read more quickly the artificiality of the cultural model of “good teacher.”

At the time of data collection, only two participants taught both tested and non-tested subjects areas: Teena, a high school teacher who had taught Biology (tested), Honors Biology OR (untested), and Earth Science (untested) during her first year teaching, and Lydia who taught only eighth-grade science (tested) in her first year, but was assigned to teach both seventh- (untested) and eighth-grade science (tested) in her second year in the classroom.

Teena leveraged the freedom accompanying her teaching to experiment with her teaching practices in a non-tested course. She recalled the rationale behind planning and implementing less widely circulated instructional practices:

So I had an idea in Advanced Bio. I think this will help if they interpret the notes in their own way. I think this will help with their reading of scientific text. I think this will help if I show them real world examples and have them analyze it, but I don't know. I was just going to try it. I think because it was a low stakes class. Like if I tried it with my Bio class that took the EOC and it didn't work, it flopped, then I would have come under scrutiny. (Interview II, 2/16/13)

Similarly, Lydia illustrated the constraints associated with teaching a tested grade level in her first year and the freedom she experienced teaching a non-tested grade level during her second.

Last year, definitely. The whole idea of getting them [students] to pass this test because that was the only thing that mattered. It was not for them to do well on their daily assignments. It was never for them to get good grades. It was ‘how can they pass the EOG at the end of the year?’ This year, with teaching 7th grade science, I’m not that worried about it because it is not that important. Now if my kids can walk out of my classroom knowing more about science than they walked in, and apply it to their everyday life, I think that’s so much more important. (Interview II, 12/14/12)

Teaching tested and untested subjects became a resource teachers leveraged to enact their agency and contest the narrow meanings of “good teacher.” Even though Lydia and Teena spoke of pressures and scrutiny associated with teaching tested subject areas, teaching non-tested subject areas presented opportunities, which they leveraged, to explore more innovative instructional strategies and enact teaching performances that were more entrepreneurial, less scripted, and more personally satisfying to them as science teachers. The agency they were able to enact allowed them to teach in a way that aligned with their own definitions of “good teacher” by avoiding the cultural meanings of “good teacher” available in their school.

Summary: The Value of Test Scores

Test scores produced from yearly high stakes state assessments or more frequent benchmark tests, figured prominently in being recognized and recognizing oneself as a “good science teacher.” Teachers of tested subjects were monitored and scrutinized via test scores, which served as proxy for administrators to determine what content was taught and at what pace it was covered. Additionally, test scores represented a mechanism through which teachers were subject to additional control in the form of

action plans, which impacted an individual's ability to feel autonomous and satisfied about their job performance.

Not all science teachers were recognized as "good science teachers" based upon their test scores; however, their ability to recognize themselves as "good teachers" was constrained by the grade level and content areas they taught. For example, Anne was not held accountable for science test scores, yet she was told to remediate reading or math with her students instead of science because her sixth-grade students were not subject to high stakes yearly assessments in science, thus impacting her teaching in a way that aligned to her personal vision of "good teacher." Similarly, Meegan received little support in deciding what to teach or how to teach it because Chemistry and AP Environmental science were not tested subjects. Lacking support prevented Meegan from achieving her personal visions of "good teacher"; however, she was hesitant to give up the instructional freedom she enjoyed compared to her colleagues who taught tested subject areas.

A clear distinction emerged in teacher's stories between those who taught subjects or grade levels that were tested versus those who taught subjects or grade levels that were not tested. With this distinction in mind, it was also important to consider how those teachers who spanned boundaries between tested and non-tested subject areas and leveraged these resources to experiment with teaching practices and their teaching identities without the surveillance and scrutiny commonly associated with tested subject areas. Specifically, teaching assignments not subject to testing afforded teachers with an opportunity to experiment with teaching practices without the fear and pressures

associated with assessment results allowing them to perform themselves in ways that initially attracted them to teaching and construct personal satisfaction and joy in their practice.

Teacher and Student Compliance as Institutional Practices

Nobody ever looked at their [students'] work or what they were producing. They [administration] never looked at how rigorous my questioning was or what skill the students were doing . . . [rather, it was] superficial things like classroom management. (Teena, Interview II, 2/16/13)

Being identified as a “good teacher” was defined by teachers who dutifully adorned their rooms with artifacts representing instructional practices and were able to maintain quiet classrooms filled with busily working students. However, in time, many teachers read the practices as superficial and inconsequential to student learning. More importantly, the practices associated with compliance reinforced the inequities many of the participants sought to disrupt by electing to teach in hard-to-staff schools. This section focuses on teacher and student compliance (see lower right of Figure 3) and the artifacts that contributed to the narrow meanings of “good teacher.”

Teacher and student compliance were ubiquitous practices that gave rise to the narrowly constructed subject position of “good science teacher.” However, the artifacts that contributed to teacher compliance (e.g., data notebooks, posting data walls, and agendas) were slightly different than those associated with student compliance (e.g., remaining silent and seated in class, walking on the blue line in the hallway) and deserve separate attention.

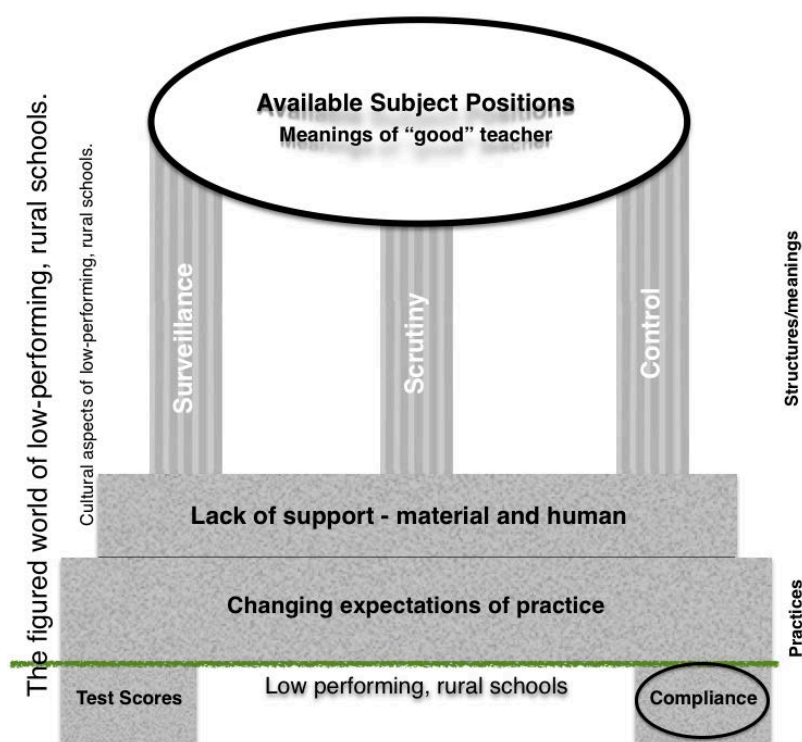


Figure 3. Interpretive Model Depicting Compliance as Institutional Practice Used to Distinguish “Good Teachers.”

Teacher Compliance

Teachers described many teaching rituals required of all of their lessons.

Regardless of goodness of fit, school administrators expected teachers to post curriculum standards and data walls in their classrooms; they were required to display lesson plans in binders and display them prominently in their rooms; they were expected to implement “do-nows,” exit tickets, literacy strategies, and graphic organizers in their lessons; and they were expected to submit lesson plans and similar reports to their administrators with little advance notice.

Anne, a second year TfA described the expectations made of her that gave rise to the cultural meaning of “good teacher” by stating:

Things are very fluid, like ‘I need your data wall by Friday.’ ‘Now we are going to focus on planning notebooks so we’re going to check them every day.’ ‘We’re going to come in to look for a do-now and an exit ticket.’ It’s like they pick these random things to focus on that are seemingly arbitrary because they are [unimportant] in the whole scope of things. They are picking one or two things that seem like they’re going to judge you based on that week. And they are temporary! Last year, all of a sudden there were these literacy non-negotiables and you had to put it in your planning notebook and highlight where they were. But nobody really followed through. I put them in there for a couple of weeks and someone would come through and say, ‘Great, I see it there,’ but they wouldn’t even wait to see it executed in the classroom, but because I followed the procedure, they trusted that I was doing them. (Interview I, 12/7/12)

Teachers viewed their administrator’s expectations as arbitrary, temporary and superficial, having little to do with measurable student outcomes. Despite these shortcomings, teachers were judged against these expectations and avoided scrutiny merely for producing the artifacts that demonstrated their compliance. In a later section of this chapter, I will further illustrate the fluid nature of expectations and their implications for individuals being recognized as “good teachers.”

Artifacts representing teacher compliance. Examples of artifacts of “good teaching” were posting data walls, displaying planning notebooks, and implementing ‘do-nows’ and exit tickets. For example, Anne described how she was recognized as a “good teacher” by stating, “I feel like you have to appease the administration. Especially at the beginning, you have to be very compliant . . . I feel like you do have to put in some energy at the beginning to be labeled as a good employee” (Interview III, 2/1/13).

Similarly, Meegan spoke of activities, such as turning in lesson plans and posting daily agendas that represented teacher compliance. Interestingly, her narrative also

demonstrates inconsistencies in monitoring and scrutiny teachers received from her administration. For instance, she recalled:

The only thing that he's [principal] been harping on lately and I know it's because we're getting evaluated on this is that you need to have an agenda in your room. That's like the only thing, but I go in the rooms all the time and nobody has them . . . [I]t's the exact same thing where like every once in a while it gets mentioned you need to do this, 'you should be doing this, you have to do this,' but I mean no one holds you accountable. I know tons of teachers who have not turned in one lesson plan since the beginning of last year and nobody has ever said a thing to them ever and then now magically, this semester, we just got a really rude email about if you don't have your lessons plan turned in by tomorrow, you'll be getting a letter [in your personnel file] and it's like you went all semester with letting no one turn them in and not care and now all of a sudden you're like freaking out about it. (Interview II, 1/16/13)

Producing artifacts representing compliance allowed individuals to avoid scrutiny. For instance Lydia stated, "[L]esson plans, last year, we had to send them in electronically, Mondays. Of course, I did all of mine because I didn't wanna get fussed at" (Lydia, 1451). Dutifully complying allowed Lydia to perform within the cultural meanings of "good teacher" and avoid scrutiny from her administration.

Anne summarized the impact of scrutiny and surveillance by stating, "Nobody comes into our room and when they do, it often feels evaluative instead of supportive" (2550). Similarly, Lori described her response to scrutiny by stating, "Whenever I know they're [administrators] going to send me something bad that I already know, it just makes me want to give up and want to go home because they have ruined my day" (852). Non-compliance often meant increased scrutiny and teachers were expected to highlight their lesson plans, display data walls, and organize planning notebooks. Regardless of the superficial meanings teachers made of these practices, they were nevertheless

consequential for beginning teachers in low-performing, rural schools to align themselves with the cultural models of “good teacher,” which contributed to their ability to construct a sense of themselves as effective, confident and capable.

Aligning oneself to the cultural model of “good teacher” had more to do with attending to assigned duties, displaying required instructional practices, and producing artifacts that represented compliance over authentic artifacts of student learning. Teacher’s stories illustrate the temporary and shifting expectations that circulated within their settings as well as the ways teacher compliance is a monitored practice often resulting in scrutiny from administrators. Feeling pressure to comply, early career teachers appeased their administrators by hanging data walls and highlighting lesson plans, and posting agendas, however many also read the artificiality of the practices they were expected to perform. Despite the erratic ways in which compliance was monitored and scrutinized, teachers remained provisionally at its mercy.

Inadequate preparation. Early career teachers felt poorly prepared to enact the practices defined by the cultural model of “good teacher.” For example, Teena recalled the “training” she received to comply with a requirement that graphic organizers be used in her lessons by stating: “We would get a packet of these graphic organizers . . . Those were only marginally, superficially helpful” (Interview III, 5/21/13). Similarly, Phyllis described, “So we got a packet of ten things to try and we all heard [them] before. Was it effective? No.” (Interview III, 2/1/13).

Although training was provided to early career teachers, merely making them aware of administrator’s expectations fell short of effectively preparing early career

teachers to deploy these practices confidently or contribute to their personal visions of “good teacher.” However, non-compliance initially meant increased vulnerability to scrutiny.

Summary: Teacher compliance. “A lack of teacher autonomy is most likely to become an issue in schools that serve historically underserved students since they are the students who most often perform poorly on standardized tests” (Sleeter & Stillman, 2007, p. 14). Previous teacher retention research suggests that a lack of decision-making power and autonomy are consistently absent in schools that teachers leave most (Ingersoll, 2004). The stories told by science teachers not only confirm previous findings, but they also provide context to how teacher autonomy is threatened by a requirement they comply with their administrator’s expectations regardless of their seemingly tangential relationship with student learning.

The cultural model or subject position of the “good teacher” was framed prominently by teacher compliance. Teachers who produced artifacts representing desired performances (i.e., posting curriculum standards, data walls, and lesson plans) avoided scrutiny. Those who were unable or initially unwilling were subject to more frequent observations, scrutiny and control through the application of action plans.

Student Compliance

Teacher and student compliance were intertwined in teacher’s stories and often discussed simultaneously. The purpose of this section is to expand on the previous section by describing how student compliance contributed to the meanings of “good teacher.” Compliance is a broad term used to describe administrators’ expectations of

both student and teacher behavior. Oftentimes, these two types of compliance (student and teacher) overlap and reinforce one another. For example, maintaining quiet and orderly classrooms filled with students busily completing assignments contributed to meanings of “good teaching.” Teena’s narrative demonstrates the interconnectedness of teacher and student compliance.

Teena: Yeah, your agenda must be on the board with timeframes. So you had to have a rigid agenda. You had to have a lesson plan binder with your lesson plans out. You had to on the board say your objective in student friendly language or essential question and like the actual goal of the lesson...

Patrick: . . . You talked about the three frustrations rigidity, social promotion, and proficiency over growth. What was the rigidity that you were speaking of?

Teena: I think it’s linked to the other two. Just an inability to change and adopt new doctrines or philosophies. I didn’t really see the leadership within the district trying to read new literature on working in low-income communities. They came from the community most likely, so they know it. Really forcing themselves to be uncomfortable with how we were running things and what we’re asking of our students. I think that it was just that everything seemed archaic. Like the same procedures and expectations that had been in place for this many years were still in place. They’re contributing to this cycle of like non-achievement really. Our students weren’t achieving at high levels.

Patrick: What was one of those rigid structures?

Teena: I mean, just I think the everyday grind of things like what we choose to focus on. ‘When I come into your room, we’re not looking for what your students are producing. I’m looking at what’s in your classroom and what’s on your board. I’m not going to talk to your students, but if your students are talking I think that means that they are not learning. I think that you’re a bad teacher because of that’ . . . I remember administrators would come into my room the last three minutes of class. If a student was sitting there and they had done their work, I would get reprimanded in front of them for it. So it’s not looking at what the student had produced to earn some down time with their brain.

Let's just focus on what you're doing as a teacher. Very teacher action oriented instead of student action oriented. (Interview II, 2/16/13)

Placing educative value on student compliance and recognizing "good teaching" by judging student compliance was in stark contrast to the values Teena envisioned for teachers. Her narrative begins with a description of the institutional practices associated with teacher compliance and terminates with the institutional practices associated with student compliance. Together, each contributed to the narrowly conceived subject position of "good teacher." During the same interview, I asked Teena to describe what her administrators used to recognize "good teaching." She responded by stating,

Teena: Behavior by far. It still exists that way today. It's still viewed that way. If you have a quiet classroom, you have a successful classroom. That's what the mindset is. That's what the belief is. That's not true.

Patrick: So as a teacher and a teacher throughout your years, were you more focused on learning or behavior?

Teena: At first, it was definitely behavior because I knew that was how I was going to get judged. Later on, I didn't care. I knew if my kids were talking in the back; I knew what they were talking about. So I think I evolved too, to have more confidence to say, 'No'! Talking means there's some learning going on if they're talking about the right thing. So I felt confidence to go against the behavior management equating learning, but at first I definitely held that as a fear too. 'Oh, my God. If I don't have something planned for the last minutes, they're going to talk and they're going to go crazy. Then today is going to be totally ruined.' In reality, that's not true. That's not always true and it wasn't. (Interview III, 5/21/13)

Teena's narrative illustrates the tensions created between the cultural model of "good teacher" and her own personal visions of "good teacher" in her school. In

addition, her narrative also foreshadows to the personal and collective agency that teachers enact to influence their willingness to persist.

Similarly, Phyllis struggled to reconcile the differences between the cultural model of “good teacher” and her own personal visions of “good teacher” by stating:

I think they [colleagues and administrators] also base a lot of - if you're not a good teacher based on how your kids will behave in the hallway, how they see them. I think people also think I'm a stronger teacher because . . . my kids will listen to me and I guess if that's kind of how I feel I judged myself. If my kids are enjoying my class . . . then yes they're going to listen to me and walk down the hallway quietly but . . . I don't know, I think just basically discipline is a lot. If you write a lot of referrals you're kind of thought to be a bad teacher because you can't get the kids in line, which has nothing to do with your being a good teacher. (Interview III, 2/1/13)

Phyllis's story provides additional evidence to the fact that student compliance was a practice that gave rise to surveillance and scrutiny that contributed to the narrow subject position of “good teacher.” Although she had attained the cultural currency that allowed her to be recognized as a “good teacher,” she also read the artificiality of how “good teaching” was defined.

Lori described what it meant to be identified as a “good science teacher” in her school by stating, “[E]veryone sitting in rows and silently writing out of a book. That is good. That's good” (2007). Similarly, Lydia responded to the question: “What constituted it going well?” by stating:

Lydia: Probably them sitting in rows, being silent, not talking, doing all their work.

Patrick: That's what was valued by your administration?

Lydia: Yes. That's what I envisioned. (Interview II, 12/14/12)

Phyllis described that “good science teaching” was defined more by what happened outside of the classroom than inside, “I think they [administration] also base if you're not a good teacher, based on how your kids will behave in the hallway” (3082). Consequently, the cultural model of “good teacher” was based primarily on compliance (teacher and students) and had little to do with what learning took place.

Artifacts of compliance. Teena's description of the meanings of “good teacher” were succinct; “If you have a quiet classroom, you have a successful classroom” (2156). Similarly, Phyllis noted, teachers are judged by “how your kids behave in the hallway” (3127). Consequently, students silently sitting in rows and looking busy (Lydia and Lori) were artifacts that allowed individuals to fit into the cultural model of the “good teacher.” Unfortunately, these same sentiments were shared by all of the early career science teachers with whom I spoke.

Teacher's ability to manage student behavior in classrooms and hallways contributed to the narrowly conceived meanings of “good teacher.” Teachers, who were able to maintain silent and compliant students who appeared to be working and completed assignments, portrayed themselves as “good teachers” in their placement despite the fact that meaningful learning may not have been taking place.

Student compliance reinforced by surveillance and scrutiny. The cultural model of “good teacher” was reinforced through discourses associated with surveillance and scrutiny. That is to say, avoiding scrutiny, or any interaction with administrators

allowed science teachers to portray themselves as “good teachers.” For example, recall Lydia’s perception of what it meant to be defined as a “good teacher” in her school, “probably them sitting in rows . . . not talking, doing all their work” (Lydia, 2217). Provided Lydia was able to accomplish this expectation, she would be perceived as a “good science teacher,” and thus occupy a celebrated position by avoiding the scrutiny from her administrator. I asked Lydia about interactions that were common with her supervisors and how they impacted her ability to recognize herself as a “good teacher” by asking:

Patrick: And therefore you don’t get much feedback?

Lydia: No. And I think it’s because I don’t have kids going crazy, if that makes sense.

Patrick: The kids are compliant—

Lydia: Yes.

Patrick: —and orderly.

Lydia: Orderly, yes. And—the illusion from the doorway looks like they’re doing something. (Interview III, 2/1/13)

Provided Lydia’s students remained well-behaved and upheld the appearance that they were working, Lydia’s performance aligned with the cultural meaning of “good teacher,” which came to mean avoiding discourses associated with surveillance and scrutiny. Additionally, surveillance and scrutiny also extended into the hallways where teachers were responsible for students’ orderly and efficient movement within the building.

Referring to this phenomenon, Lydia added, “and if my kids are on the blue line, I’m good to go” (1401).

Fear of scrutiny weighed heavily on teacher’s ability to practice with confidence. Referring to the impact interactions had on her confidence; Lydia recalled how she felt about her administrators by stating, “Oh, I was petrified of them, literally” (Lydia, 1533). Lydia’s reflection as a first year teacher illustrates the significance of scrutiny on her confidence and willingness to persist.

School administrators were not the only actors involved in monitoring and scrutinizing early career teachers. Peers, mentors, and colleagues contributed to the ways early career teachers were positioned. For example, Lori described being observed and judged by her peers, positioning her as “the crazy science teacher.”

Lori: If I have kids on the floor tracing bodies, everyone freaks out and decides to come watch Ms. [Surname’s] class. You should have seen it yesterday. All the teachers who don’t have anything to do are all standing in my classroom looking at kids do it. I was like okay that’s fine, but they were wondering why we are doing this. I said we were starting a project so they’re just doing this in the last ten minutes of class so tomorrow we can start with the “meat”—what’s the big deal?

Patrick: You do feel they were standing in judgment or do you think they were standing to learn new strategy?

Lori: Some of them I know were judging and some I think were just in shock that the kids were actually doing it—not ripping off the paper and running down the hallway or something.

Patrick: How did that make you feel at that time as a teacher placed in that situation? How did that make you feel?

Lori: Like I don’t know what I’m doing—like I’m crazy or something.

Patrick: The teachers think?

Lori: Yeah, they think lets go see the crazy science teacher and go watch—I'm thinking that's fine. (Interview I, 12/6/12)

Lori confidently defended her instructional practices and accepted the ways her colleagues had positioned her as “the crazy science teacher” and seemed unfazed; indicating a confidence in her ability that was uncommon among other first-year teachers with whom I interviewed. Lori's narrative also illustrated how surveillance and scrutiny associated with student compliance served to reinforce the narrow definitions of “good science instruction.”

Summary: Compliance as an Institutional Practice

According to Ingersoll and May's (2010) study of mathematics and science teacher retention, the degree of student discipline problems within the school were considered among the strongest factors to predict science teacher retention. However, the above teacher narratives harbor little criticism of student behavior, rather they described student behavior as a structure by which their performance as teachers was evaluated—a structure reinforced and made available through surveillance and scrutiny from their administrators and colleagues. In other words, teachers were not disappointed by students' misbehavior, nor did they describe student misbehavior as barriers to achieving their personal vision of “good teacher”; instead, early career teacher's references to student behavior was in regard to how student behavior contributed to an ability to occupy a celebrated subject position in their school.

Students were not the only population in the building required to comply with behavioral expectations. Teachers were expected to comply with behavioral expectations

used to distinguish themselves as “good teachers.” Most notably, maintaining quiet and orderly classrooms, in addition to posting agendas, displaying lesson plans, using tickets in and out of the door, implementation of graphic organizers, and integration of various literacy strategies were practices that allowed teachers to fit into the cultural model of “good teacher.” Unfortunately, these cultural meanings conflicted with teachers’ personal meanings of “good teacher” and impacted their willingness to persist.

A lack of meaningful training served as a barrier to effective implementation and limited teachers’ understanding of the desired effects of these required practices. Furthermore, a lack of follow-through and fear of scrutiny associated with failed attempts at implementing preferred strategies left teachers unsettled and skeptical of these practices. These stories add texture to our understanding of teacher working conditions that contribute to teacher’s satisfaction and persistence by identifying the structures that guide teachers’ practice and describing the discourses through which they are made available. In summary, teachers’ ability to fit into the cultural model of “good teacher” was predicated on their willingness and/or ability to comply with changing institutional policies that many teachers viewed as inconsequential to student learning.

Teachers’ stories describing who and why individuals were recognized as “good teachers” resulted in interesting reflections of what it meant to teach science in a low-performing, rural school. For instance, Phyllis hypothetically offered advice to new teachers by stating, “stay humble . . . get them [administration] what they are asking for and don’t take it personally . . . being a good employee equates to being a good teacher” (Interview III, 2/1/13). Similarly, Anne reflected, “If you’re new, you’re targeted. We

earned our keep last year . . . something that seems so arbitrary like you have your objective on the board . . . for the most part we had done it . . . we earned our keep” (Anne, Interview III, 2/1/13). These recommendations made by early career teachers, reinforces the notion that appeasing administration by remaining compliant, figured prominently in being recognized as a “good teacher.” Further, according to some, being a “good teacher” was necessary to avoid being targeted by administrators. Taken together, being compliant and avoiding scrutiny was significant to the cultural meanings of “good teacher” in rural, low-performing, hard-to-staff schools.

Expecting the Unexpected: Changing Expectations of Practice

The school culture just keeps flip-flopping. They will take this idea and then it seems good, but never really gets enforced so they come up with another one and the same thing happens. We go through all these new ideas, but we never actually stick to an idea and expand on it. Nothing seems to stick. (Donnasue, Interview III, 12/6/13)

This section examines how the narrow meanings of “good teacher” were narrowed further by continuous changes in the expectations of teacher practice, which consequently, made fitting into the cultural model of “good teacher” even more challenging. Fitting into this model meant staying flexible, adaptive, and confident by remaining unfazed by daily changes to institutional practices by maintaining compliance by tempering the uncertainty that surrounded them and teaching with confidence and portraying themselves as being in control.

During my daily visits to rural, hard-to-staff schools, I could hear the evidences of changing expectations over the intercom and in discussions taking place in faculty

meetings, workrooms, and hallways. They could be seen as teachers responded to an email or memo that resulted in them scrambling to salvage instruction when their instructional time was suddenly shortened by an assembly or test. And they were present in teachers' narratives when they described ways their planning periods were "abducted" (Meegan, 2481) by impromptu meetings or similar changes in schedule. Consequently, the practices of "good teachers" involved adjusting confidently and remaining present given the uncertainty circulating within the school.

Returning to the interpretive model (center), I turn my attention on the changing expectations of practices that contributed and served to further narrow the available subject positions of "good teacher."

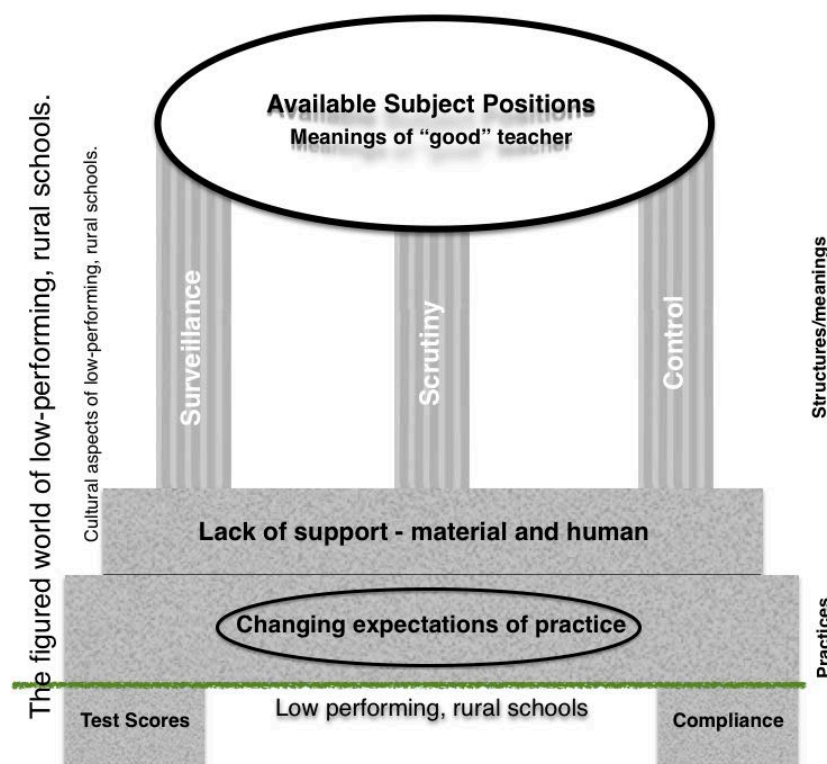


Figure 4. Interpretive Model Highlighting Changing Expectations of Practice.

Teachers described the need to be flexible and spontaneous, resulting in reactions to change rather than an ability to plan for them. For instance, Donnasue stated, “you really need to be spontaneous and flexible” (Donnasue, 1521) because “in my school we seem to flip flop from idea to idea” (Donnasue, 3923). Similarly, Meegan noted that her administrators exhibited “this inability for them to follow through with anything” (4003). Additionally Donnasue spoke of some examples of changing expectations by stating, “then they throw in these crazy assemblies and then oh, surprise, we’re going to have benchmark tests for an entire week so don’t really plan anything for this week” (2681). Similarly, Phyllis described the impact of changes in schedule to her ability to plan for instruction by stating, “I’ve got so many instructional days. According to my principal, 20 are going to be lost to miscellaneous” (1115). “Miscellaneous” days were a way to account for impromptu assemblies, field trips, or other school-wide programs that would obstruct the normal instructional activity. Anne, who taught in the same school, agreed with Phyllis by describing a school schedule that was “very inconsistent . . . the lunch schedule would change, [or] we don’t have reading intervention this week” (Interview I, 12/7/12). Consequently, teachers were often left ill prepared and unsure of what or how to plan for their classes resulting in feelings that instructional time was not valued.

Fitting into the existing cultural model of “good teacher” was increasingly difficult given the shifting nature of school-wide expectations. Expectations of teachers and students changed from month-to-month and week-to-week. Tensions arose because teachers were unable to predict or plan for the frequent changes, which ostensibly availed them to additional surveillance and scrutiny. For example, Donnasue described how

shifting practices associated with student compliance narrowed the meanings of “good teacher” by stating,

[S]ometimes it’s living by mistake . . . I didn’t know that students were only supposed to line up on this particular side of the hallway. Now that I’m already in trouble for doing it this way—I was never told . . . it is just like getting into trouble when you never heard of these rules in the first place. (Interview III, 2/6/13)

Similarly, Lori shared an experience when a sudden change in school policy required students to have a hand-written pass to be in the hallways. This sudden change caught Lori unprepared and vulnerable to additional scrutiny. For instance, she stated:

That’s what we’re supposed to do now, for everything . . . I didn’t know . . . one of [my students] got something in her eye so she went to the bathroom . . . she came back with a referral . . . if I had known that, I would have been prepared, but if you don’t know, you’re not prepared [and] then you look like an idiot. (Interview II, 12/14/12)

Additionally, changing expectations caused teachers to question whether school-level decisions were in the best interests of learning or in the best interests of historically underserved students. For instance, Lori described the changing expectations as an obstruction to meaningful change by stating:

[T]hat’s not how a school is supposed to run. I know sometimes they try really hard to focus on something but then it fades away. It never stays for a long enough period of time for anyone to care about it. (Interview III, 2/1/13)

Similarly, Phyllis described:

[T]he disorganization, I think that's maybe one that I was also trying to say earlier . . . I literally didn't think school was gonna function on the first day of school last year because . . . we as first year teachers, brand new to the district didn't know how to take attendance. I didn't know where to take my kids to get on the bus . . . It's just like everything is thrown together and it's so disorganized. There's so little forethought in anything. Everything's reactionary like oh, crap, we've got to figure something out for this, or we've got to do that, and it's just like so poor planning and that was something I really had to—I'm still getting used to. (Interview I, 12/7/12)

Yeah, I used to freak out about it. Like the beginning of this year, I literally had panic attacks every morning. [Now] I know that things are not gonna go according to plan and then that there's gonna be so many things that crop up but I have gotten used to it . . . By now, I'm used to it. I'm just like, 'if something goes wrong, I don't panic' . . . But it's a lot of unexpectedness because it's not really like a well-run place. It's not really consistent with procedures. It doesn't have school wide procedures. There's a lot of things that just like you are just kind of on your own doing what you're doing and it's when people decide to come in and change things, they can't really change it in a consistent manner. (Phyllis, Interview II, 12/14/12)

The norms and practices early career teachers associated with *school* were in a continuous state of motion. Unscheduled testing, assemblies, and frequent changes to school policy continuously redefined what it meant to be a “good teacher.” Further, these changes also affected the distance between one's personal vision of “good teacher” and the existing cultural model of “good teacher.”

Structures/Meanings of Changing Expectations

Changing expectations prompted feelings of distrust between teachers and their administrators. For example, Phyllis described her response to the constantly changing mandates by stating, “I feel like administration is trying to play with us, it's been a gotcha

game” (472). Similarly, Teena interpreted the surveillance and scrutiny associated with changes in expectations as “micromanaging criticism” (2150).

The changing expectations positioned teachers as continually vulnerable by stripping them of their professional confidence. For instance, sudden and poorly communicated changes resulted in Lori being positioned as an “idiot” for not knowing that hand written passes were required of all students in the hallways. Similarly, Meegan explained how sudden changes served to position her as incompetent by stating:

The kids sense it too . . . [students will ask], ‘Why are we having this grade level meeting [or assembly]?’ . . . I have no idea and they [students] see it makes us look really incompetent . . . I worry how much of that transfers into my teaching and how much they’re [students] are like ‘she never knows what’s going on, how serious can we take this woman?’ . . . The culture of the school is so embedded with this inconsistency that kids know, the kids like I heard them all [say], ‘it doesn’t matter . . . that rule won’t go through anyways. None of them ever do, that rule doesn’t matter.’” (Interview III, 2/6/13)

Changing expectations not only impacted teachers’ ability to fit into the cultural model of “good teacher,” they also negatively impacted their ability to feel as though they were doing a good job.

Unexpected changes in school schedules impacted experienced and early career teachers similarly, resulting in them questioning their effectiveness and willingness to persist. For instance, Lori, a first-year, traditionally prepared teacher described:

I try not to make copies too far ahead of time . . . [because] then the school will change something or do something . . . if they change the amount of my class time, or change something, I can’t use it . . . So, I try to make copies for the day, which in every other school I have been in is highly frowned upon to be making copies for that day on that day. (Interview II, 12/14/12)

Similarly, Carol, the most senior participant described the impact of changes by stating, “[W]hen everyday they come up with something new and you need to do it tomorrow . . . [for example], we’ve heard like five different things in the last 24 hours . . . It dampens your spirit” (Interview I, 1/31/13).

Carol, in her 11th year in the research site, provided insight to the cause of the frequent changed in expectations by stating, “I’ve been through maybe three principals—or was it four—since I’ve been here, [and] we have made many changes with the assistant principals” (93). Changes in leadership and faculty contributed to the shifting expectations from year to year and the dynamic nature of the day-to-day operations led to teachers’ feelings of insecurity and scrutiny.

Summary: Shifting Expectations

Surveys of teachers who decide to leave teaching cited intrusions on instructional time and limited faculty input into school decision-making, as contributing to their dissatisfaction with their teaching placement (Ingersoll, 2001). The narratives presented above provide evidence of both claims. However, attrition is the product of daily work that teachers perform under difficult circumstances. The above narratives illuminate how the changing structures that are present in schools contribute to the daily struggles produced when teachers’ lives intersect with them. Teachers were expected to comply with norms and expectations, but compliance was sometimes difficult to achieve in an environment where expectations were transient.

Lack of Material and Human Resources

It's not just the lack of tangible resources, but human resources, like someone who could tell you what to do or what to try, what works well for this unit, what doesn't go well, because, like I said last time, you're getting all this advice from English and Math. I don't have anyone in my school who's like, 'Oh, you should try this for this unit. That worked really well for my kids.' No one can tell me that. It's kind of like me doing my thing. (Lydia, Interview II, 12/14/12)

A lack of resources, both material and human, limited early career teacher's ability to provide experiential learning, engage students in doing hands-on science, and provide the kinds of instruction that would challenge the dominant types of instruction that valued compliance and test scores because these expectations did little more than prepare students for end-of-year tests.

Figure 5 illustrates how lack of support is situated given other practices of test scores and compliance and how these contribute to the narrow meanings of "good teacher."

Feelings of isolation were consistent in teacher's stories. Their narratives illustrated how an absence of instructional resources and human supports necessary to guide them through their early careers, were seen as barriers to realizing their personal visions of "good teacher." Moreover, even experienced teachers noted that a shortage of resources both material and human impacted their ability to achieve their personal visions of "good teacher." For instance, Carol compared the material resources available in her current placement to those in her previous placement by stating, "[T]he technology was a little bit less over here than it was there [her previous placement], but that didn't bother me because there was a way to get around everything to do what you need to do" (372).

Carol's experience was her greatest ally to combat the shortage of materials, yet experience was not a resource from which early career teachers could draw.

Interestingly, a lack of human resources was far more pronounced in teacher's narratives than that of material resources. For example, Kyla noted that the turnover experienced within her department served as a barrier to collaborative planning by stating, "there's not such a thing as a science family" (127).

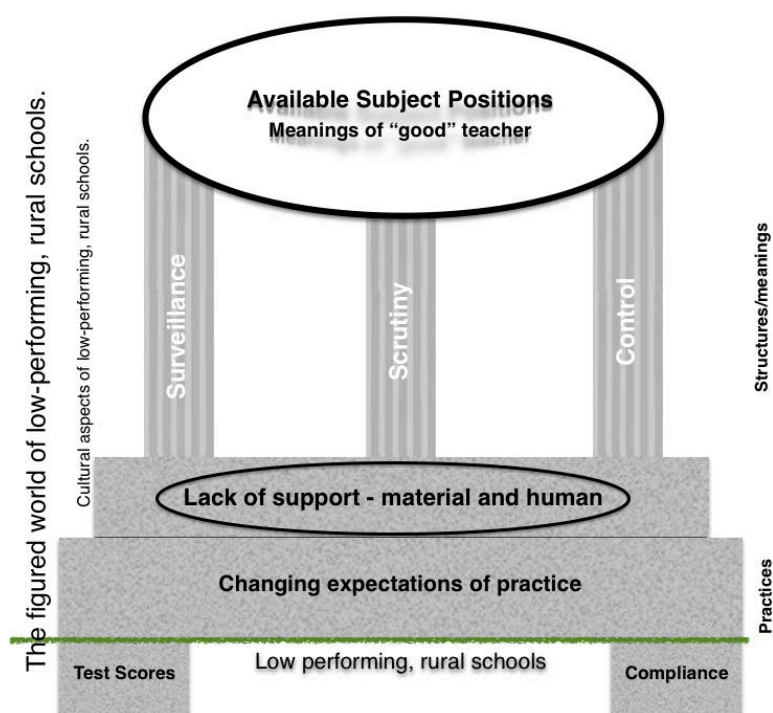


Figure 5. Interpretive Model Depicting Lack of Support—Material and Human.

Lack of Material Resources

Seven of the nine participants mentioned a lack of material resources as barriers to providing students an opportunity to engage in science instruction by doing. This was especially significant for teachers motivated by a desire to give back because realizing

their visions of “good teachers” were somewhat dependent on having resources available. Teachers associated “good teaching” with students in doing science, having fun, and finding relevance of science to their own lives. Unfortunately, since student compliance and test scores predominated the institutional meanings of “good science teacher” fewer resources were available for teachers to engage science students in meaningful and relevant ways. For instance, Lydia shared:

I am very frustrated about teaching in a classroom without a sink. How can you call it a science classroom if it doesn't have a sink? It is frustrating to know that I could do so much more to help students learn and even have fun doing it, but supplies are limited. (Interview II, 12/14/12)

Similarly, Teena and Donnasue identified desires to give back as motivational to their decisions to teach. Giving back came to mean providing students with similar opportunities that they had enjoyed as students. However, each was limited by a lack of material resources to do so. For instance, Teena stated,

I think most of my frustration came from the lack of experiential learning that I could provide for my students because of the lack of resources in the school. The high school that I went to was packed with all kinds of different lab kits and dissection kits; but if you wanted to do a lab to solidify some kind of learning, it was there . . . Yeah, lack of supplies, lack of funding. Overall the [my] school [not] just the science department was lacking those funds or the resources. (Interview II, 2/16/13)

Similarly, Donnasue shared:

Today I was talking about metamorphic, sedimentary, and igneous rocks with my 8th graders. It would have been awesome to have rocks to let the students see the differences between the three, but there are no rocks that I know of in the school. I have no microscopes in my room. And I wanted to order this glow germ stuff

that makes the germs on their hands glow, but I am unable to plan far enough in advance to order the materials so that it will be here in time. It would be really cool if there was someone to help the first year teachers look ahead in their curricula they could give me a heads-up to order it. (Interview I, 1/16/13)

Early career teachers entered their placement with a desire to engage students in experiential learning, make learning science fun, and provide hands-on experiences for science learners. However, a shortage of material resources constrained their ability to perform themselves in ways they associated with “good science instruction.” Consequently, the remaining subject positions reinforced student compliance and independent work, which prevented teachers from recognizing themselves as being “good teachers.”

Lack of Human Resources

I feel completely alone, completely unsupported. I have no one to look to in my school whatsoever. I’ve tried to reach out to other schools in this district and have not gotten a single response. (Meegan, Interview II, 1/16/13)

An absence of human resources limited teacher reflection, meaningful planning, and professional conversations to challenge the narrow instructional practices for which teachers were celebrated. All nine participants mentioned a lack of human supports as a barrier to their ability to plan and enact engaging lessons and teach with confidence.

For example, at the time of our second interview, Meegan had completed her first semester teaching Chemistry and facilitating a distance-learning Advanced Placement (AP) Environmental Science course made available to under-resourced schools in the state. Since Chemistry was not a tested subject, and AP students at her school generally

did not take a test, Meegan avoided surveillance and scrutiny associated with tested subjects which resulted in immense freedom in the ways she taught. However, the lack of support she received as a teacher of a non-tested subject area frustrated her. In a crisis of confidence, she stated, “I do not have the training or education that I should in order to be like the *crème de la crème* . . . to get my kids where I want them to be” (Interview III, 2/6/13). Interestingly, Meegan’s personal vision of “good teacher” had little to do with compliance or test scores, but the resources she required to achieve her vision were lacking.

Similarly, Phyllis spoke of the value, and lack of, content-specific instructional support that impacted her ability to teach in ways that aligned with her vision.

I feel really unsupported. I spend a lot of time just browsing the internet trying to come up with ideas for lesson plans and teaching strategies, but since I don’t have anyone to collaborate with, I lack the confidence that I am teaching in the most productive way. I fear that my kids might be bored or wind up wasting valuable time. I am frustrated because I don’t feel like the best lesson planner and I don’t feel like I’m getting any help from within the district – except for you and you don’t come anymore. I wish I had more instructional support as I work through my lessons and teaching. For example, I would like something constructive like, ‘why don’t you try this for a week and we’ll check back to see how it’s going.’ That’s what I would like more of . . . I wish that I just had more instructional support along the way. (Interview III, 2/1/13)

Phyllis’s desire for additional support was influenced by a perception that she was not engaging students in meaningful ways; therefore, she was unable to be the teacher she envisioned. Her narrative illuminates the importance of content specific guided reflections with experienced teachers in helping to recognize herself as a “good teacher.”

Teachers spoke of structures that *were* in place to assist early career teachers (i.e., new teacher induction, professional development, and mentors), yet, Teena's narrative revealed the imperfect nature of existing supports:

I saw my mentor maybe once and I was just grabbing for anybody that could help guide my teaching. Usually, I just went with whatever was happening in other classrooms. I found that the things that were most important to me did not relate to the things that administration was saying they wanted to see. Consequently, there was a huge disconnect between what our administrative team wanted to see in our classrooms and how to achieve those outcomes. The feedback we received also felt like micromanaging criticism. For example, behavior management was a frequent topic of discussion within the school and from our administration. It's not behavior management that's the problem, it is that they [students] are not engaged—they are not invested in school. I had to figure this out on my own because even my mentor wasn't helpful because she did not teach science. (Interview III, 5/21/13)

Achieving personal visions of “good teacher” proved difficult for early career teachers in rural, hard-to-staff schools because of a lack of support. Similarly, Lydia described a lack of support from her school administrators that was entwined in scrutiny and led to frustration and feelings of helplessness. For instance, she recalled:

During that first year there weren't any norms or expectations made clear by my administration as to what and how we were to teach, but as long as our kids weren't going crazy, were generally left alone. However, rather than observing our classrooms, our principal relied on district benchmark data to publically criticize our teaching—many times in front of our students and other staff members. If our scores weren't good, and mine were terrible, she would publically say things like ‘Okay, you're doing this wrong—you're doing that wrong. This is terrible. You're terrible. You're a terrible teacher’ . . . but would never offer me advice. My principal could tell me things that needed to change. *I knew they needed to change, but she could never really give me any concrete examples on how to change them* . . . There was never anything positive which was frustrating to me because I am trying to learn how to be a teacher, first. And she is not letting me have that space to fail and learn from that experience. She pressures me to be perfect every single day, but I don't know what that is because

she can't tell me. Whatever I'm doing's not working. I don't know what else to do. (Interview I, 12/7/12)

Lydia's narrative captures key aspects of science teachers' experience emerging from participants' stories: test scores, compliance, changing expectations and lack of support. These key aspects help to reinforce cultural meanings of "good teaching" in these schools. In addition, Lydia describes how surveillance, scrutiny, and control defined what practices were celebrated and which would result in ongoing frustration. Understandably, early career teachers found it difficult to perform themselves in institutionally-mandated ways and the narratives provided by science teachers suggest two reasons for this: the definitions of "good teaching" were dynamic and changed with little advance notice, and support for teachers to implement the changes were inadequate.

Teachers as Replaceable, Trainable, and Interchangeable

Human supports were in short supply, but fell short of being non-existent. For instance Teena described how teaching and learning in her school was conceptualized by some of her colleagues as rote and mechanical resulting from prescriptive activities or communicated by passing along lesson plans.

I think as a first year teacher, you can get a thousand different resources and a thousand different lesson plans; but until you have someone explain that to you in context of your classroom and what that means for you and what your students should be producing, you have no idea how to use it or implement it. So I think that's where the disconnect was . . . I think the resources exist, but they're not explicitly explained and their design not justified. So as a teacher oh, 'this is cool that I have this.' When am I going to look through it and who is going to explain it to me?' So that was what was missing in those circumstances. (Interview III, 5/21/13)

Additionally, Teena shared that opportunities to observe other's classrooms, "[was] never really encouraged" (2355). However, she did recall an instance when her peers led her astray:

I would say when I asked for advice—because I asked a couple of veteran teachers, 'Do you share about your life? Do you share with your kids some personal stuff about you?' And they were like, 'Don't tell those kids anything about you' . . . I think at first, I believed that. And that might be why I had a hard time engaging with . . . that first group of kids that I had because I was afraid to let them in to too much of my personal life. But I changed that second semester because I found out through talking to them and telling them little personal tidbits about myself, they got to know me more and became more engaged and invested in me. And then they could be invested in what I was saying to them. So definitely that was wrong advice because relationships were the first thing that I should have tried to build by far. (Interview I, 12/6/12)

Teena concluded, based on this advice, that she should withhold personal aspects of her life and keep her students at a distance. In practice, however, she discovered that building and sustaining relationships with her students through personal stories, provided leverage to shift her instructional practices and challenge the institutional structures that celebrated compliance and test scores in her school.

Similarly, Meegan described the influence interactions with colleagues had on her teaching identity during a staff meeting on the first day of school. She and her colleagues were asked to participate in an activity requiring them to select a card from a table that best represented their identities as teachers. Meegan recalled, "[T]here weren't many good ones. There were some really funky words. But I remember the one I picked was . . . *partnership*" (Meegan, 974). The next step in the activity was to find someone

among the staff that had a card similar to the one they had chosen and then talk about why they chose it. Meegan continued,

And when I looked at theirs, they were definitely the words that had to be dealing with like ‘head of the house’ or ‘captain of the ship’—That’s actually what the cards were. I just got the feeling that the adults thought of themselves as being in charge and the students were expected to follow the directions of their captain. While sharing out, I got this vibe from my colleagues like, ‘all-right, hippie-girl you try to partner with your kids and we’ll see how that goes—In my classroom, I’m the king of the castle.’ (Interview I, 12/5/12)

Although teachers reported that content-specific human supports were scant, the advice that some managed to receive failed to produce perceptions of themselves as “good teachers” or help them enact teaching identities that they desired. Meegan and Teena’s narratives demonstrate that ways that others influenced their understanding and resistance of the cultural meanings of “good teacher.”

The Impact of Content-Specific Instructional Coaching

Teaching without human supports produced an unpleasant experience for Lydia. Based on her test scores and student misbehavior in her first semester, she found it difficult to align with the cultural model of “good teacher,” generating fear, uncertainty and helplessness on a day-to-day basis. I asked Lydia to reflect on her perception of herself as a teacher by asking,

Patrick: So what’s changed? Do you still see yourself as the same person as you were last year?

Lydia: No, absolutely not. Can I give you credit?

Patrick: I mean you can, but honestly, this study has nothing to do with me or the . . . services that I may or may not have provided. This is about how teachers change over time.

Lydia: [Through tears] Well, honestly, it's because when you came to my classroom and you saw how terrible it was, you could tell me what I needed to do . . . But seriously, you came, and you said, 'This is what needs to happen, and this is one way you can do it, and this is a new way'—it just totally blew my mind. And I think that's all I wanted. I just wanted someone to be like, 'Here's some help' and I couldn't find anybody, and that's what, literally, changed my entire way of thinking, and I started loving it.³ (Interview I, 12/7/12)

Summary: Lack of Resources

Ingersoll (2004) noted that teachers leaving rural schools cited poor administrative support, lack of teacher autonomy, and student discipline problems as primary reasons for departure. The teacher stories above, add texture to our understanding of the conditions found in rural schools in that shortages in support extend beyond building level administrators to included members of leadership teams, department chairpersons, and instructional materials. Teacher narratives indicate that their inclusion in leadership positions resulted in a void of human support available to early career teachers to guide their practice, hone their skills, and support their growth needed to recognize themselves as “good teachers.”

Lack of material and human support also had a negative impact on teacher's sense of autonomy. Materials to promote science instruction were unavailable to teachers and the stories told by participants provided insight to possible causes. For instance,

³ Lydia's classroom was not terrible, but her teaching lacked compliance and test scores, which resulted in her being identified as a poor teacher. I also attributed her lack of confidence to the surveillance and scrutiny she often received. With support, she developed a more sophisticated understanding of the curriculum and began to plan and deliver instruction that was more thematic, interesting, and relevant to students' lives.

department chairpersons are typically responsible for inventorying supplies and creating check-in and check-out procedures for their use. However, it was common to find early career teachers occupying these leadership positions. Meegan noted, “I am department chair which is ridiculous” (2954) because she was unaware of the inventory and knew little about checkout procedures. Lydia felt isolated in her leadership role stating, “I don’t have anyone to talk to because I’m my own chair” (2285). She continued by describing the import of human resources by stating, “resources would be great, but I would much rather listen and learn from somebody else and let that creativity come later with the tools” (2301). Lacking both material and human supports constrained teachers’ ability to achieve their personal visions of “good science teacher,” which strained their willingness to persist. Finally, participant narratives suggest that changing expectations and the resultant scrutiny associated with an inability to maintain student compliance, more than student discipline itself, weighed on their willingness to persist.

Chapter Summary

I probably alluded to this but didn’t explicitly say it. Teachers didn’t seem happy. It was not a happy place to go. Even I fell into the trap of like, ‘Man, I just don’t want to be here today. I don’t know what’s going to happen. I don’t know who is going to be rude to me today.’ And that was not just students, that was for other people . . . It just wasn’t a culture of we’re all going to be happy and just celebrate the fact that we’re here and we’re teaching these kids . . . I think it’s a perpetual cycle of negativity . . . I think at first just culturally not knowing what to expect. I think people can tell you when you go into a rural low-income community, life is like this . . . It’s hard to come into a community and understand what it’s like to live in your student’s shoes and the barriers that exist because of that. Also, the barriers that exist because these students are used to high turnover rates and not just with Teach for America being there two years and leaving; but with faculty of non-TFA. Turnover with those teachers is really high as well. So I think there were barriers within the students not wanting to let people in, in general, because they’re afraid to be hurt or taken advantage of. Someone to tell them ‘you can

trust me, I'm here for you and then leaving.' Not being there, not following through. (Teena, Interview I, 12/6/12)

I began this chapter with Lydia's metaphor comparing teaching in a hard to staff school to being caught in rough surf. The ebbs and flows of school culture was made up of norms and practices that included test scores and compliance that gave rise to surveillance, scrutiny, and control which contributed to the narrow meaning of "good teacher." Like navigating unpredictable surf, taking up these practices was made more challenging due to the changing expectations and lack of support available to science teachers. Similarly, I close the chapter with a summary from Teena who characterized her school as an unhappy place to be and was unsure what to expect, aside from a cloud of "negativity," each day she walked into school. Teena also attributed an inability to form relationships with her students to their skepticism of teacher's persistence through the course of their schooling. Her narrative, along with those of other participants, provide textured examples of the kinds of work teachers in hard-to-staff schools perform each day in order to persist by enhancing our understanding of how "good teachers" are defined in low-performing, rural schools.

The purpose of this chapter was to present the realities of teachers working in low-performing, rural schools, to reveal the culture they were expected to work and their students were expected to learn. Interpretation of participant stories was guided by Holland et al.'s (1998) conceptual framework of figured worlds to explain teachers' situated understanding of themselves through the artifacts, discourses, and positions made available to them in their placement schools. According to Urrieta (2007a), "In figured

worlds people learn new perspectives of the world and through them learn to ascribe artifacts and actions with new meaning, new passion or emotion” (p. 110). Teachers were judged and evaluated implicitly and explicitly against very narrow meanings of “good teacher.” These meanings were so narrowly construed that they conflicted with individuals’ personal visions of “good teacher.”

Test scores produced on annual high-stakes tests and more frequently administered benchmark assessments distinguished the prototypical “good teacher.” However, a distinction was made between teachers who taught tested subjects and those who did not. Teachers of tested subject areas were subjected to the narrow meanings of “good teacher” by way of surveillance, scrutiny and control from their administrators. These practices and meanings gave rise to the cultural meanings of “good teacher.” Interestingly, teachers who taught both tested and untested grade levels or subject areas, recognized the latitude that was extended to them in regard to their untested subjects and leveraged it to experiment with less widely circulated instructional strategies.

Student and teacher compliance distinguished the prototypical “good teacher.” For example, producing lesson plans containing particular instructional strategies, posting agendas and objectives on the board, and maintaining quiet and orderly students in the classrooms and the hallways were simultaneously practices and artifacts used by administrators to recognize “good teachers.” Conversely, little attention was paid to the kinds of activities students engaged, the discourses they produced, or the kinds of questions they were asked. Rote and mechanical teaching strategies that maintained order were recognized and reproduced.

All teachers, regardless of their teaching assignment, recognized the shifting nature of practices contributing to the construction of the prototypical “good teacher.” Considering the institutional structures that placed value on compliance, test scores, and shifting expectations, the prototypical “good teacher” was also entrepreneurial. That is not to say teachers were able to practice themselves freely because instructional and behavioral expectations prevented such activity; however, that is to claim that teachers were expected to be entrepreneurial in finding material and human supports to enact their personal visions of “good teacher.” A dearth of mentors, induction support, content-specific professional development, and science colleagues hindered early career teachers in this endeavor. Furthermore, positions typically associated with support (e.g., department chairs, members of school leadership teams), were often early career teachers themselves. Thus reinforcing the lack of human support early career teachers desired to achieve their vision of “good teacher.”

CHAPTER VI

POSITIONING WITHIN AND AGAINST INSTITUTIONAL STRUCTURES WITH IMPLICATIONS FOR TEACHER RETENTION

[M]y kids were by far the thing that turned that around for me. Because once they started having fun, and they started learning and finding value in what I was giving them, it just became a whole different ballgame. They were happy to be there. They were excited. They were seeing progress. They felt confident, and that helped me feel confident and positive and love them more and get to know them more. And that obviously . . . turned it around for me. (Teena, Interview I, 12/6/12)

Introduction

In the previous chapters, I examined the experiences contributing to an individual's decision to pursue a career in education (Research Question #1); next, I examined the experiences of teachers in hard-to-staff schools to illuminate the institutional practices and structures that gave rise to the meanings of "good science teacher" (Research Question #2). In this chapter, I examine individuals' conceptions of themselves in socially and culturally constructed worlds as well as the control each has over their own activities.

The narratives presented in Chapter V depicted the narrow meanings of "good teacher" promoted in the teachers' professional contexts, suggesting attrition was inevitable. However, challenging the notion that teachers are passive recipients of the circumstances in which they find themselves, I focus attention in this chapter to the responses teachers authored to persist. These narratives represent hard-won struggles that

may offer insight into resources new teachers may find valuable in constructing their own persistence.

Drawing from Holland et al.'s (1998) theoretical framework of figured worlds, I examine how teachers “can at least have a voice in directing one’s own actions” (175) by exerting “at least a modicum of agency or control over their own behavior” (p. 40). Thus, it is of specific interest how participants enacted agency to create meanings of “good teacher” that aligned with, and sometimes contested, the meanings promoted in their schools.

Research Question 3: *In what ways do science teachers author themselves within and against the realities they describe as significant?* A related sub-question: *What do teachers’ stories tell us about their willingness to persist?* guide the presentation of data in this chapter. Teachers’ stories of the ways they author themselves within and against institutional structures represents how persistence is a hard-won and ongoing achievement requiring individuals to align themselves with or contest the realities described in the previous chapter. Interestingly, paying attention to ways individuals contest institutional structures provides insight for how persistence is constructed in hard-to-staff schools.

Past research examining teacher retention has overlooked what teachers do when faced with less than ideal school conditions to promote their moment-to-moment persistence. This notion of “persistence” or “retention” as *ongoing* work is a shift from previous literature and I draw on acts of agency needed for these teachers to persist through the next week, day, or period. In this chapter, I focus my attention to spaces of

authoring which give rise to new activities and ways of being that emerge from an individual's capacity to act upon one's world, give it shape, meaning, and texture, which is captured in Inden's definition of agency:

That capacity is the power of people to act purposively and reflectively, in more or less complex interrelationships with one another, to reiterate and remake the world in which they live, in circumstances where they may consider different courses of action possible and desirable. (Inden, 1990, as cited in Holland et al., 1998, p. 42)

Overview of Findings

Teaching can be a joyful and immensely rewarding experience; teaching in a low performing, rural school has proven to be of no exception. However, teaching in hard-to-staff schools is fraught with challenges that have been statistically correlated to teacher attrition. Some challenges were predictable (low salary, accountability pressures, and heavy workloads) and some were surprising (small class sizes, teacher autonomy, and early opportunities to occupy leadership positions). The narratives of science teachers' experiences reveal nuances that contribute to persistence as a hard-fought, ongoing process to better understand the day-to-day interactions that contribute to one's perseverance.

I have organized each of the nine participants' stories into four storylines illustrating how individuals authored themselves within and against the widely circulated practices and meanings that constituted "good teaching." In other words, I found four primary ways that teachers enacted agency in their setting to do the daily, ongoing work of persistence necessary to stay in their positions. Below is a summary of the storylines:

1. Authoring oneself within institutional practices, as a “humble sponge,” enabled some teachers to learn the culture of the school while dutifully performing in ways to that allowed them to be recognized as “good teachers.” However, being recognized as a “good teacher” did not always equate to recognizing oneself as a “good teacher.”
2. Some teachers initially authored themselves within institutional structures to be recognized as “good teachers” in their school. Over time, these teachers also became subtly subversive toward these structures, reading them as artificial, ill-aligned with their vision for teaching, and/or unhelpful in promoting meaningful student engagement and learning. Consequently, they created broader meanings of “good teacher” that were more personally satisfying.
3. Some teachers read the celebrated performances of other teachers in their schools to be artificial and inconsequential to student learning and were unwilling to author themselves within narrowly defined meanings of “teacher” promoted by their schools’ practices. This was the most “radical” group in that they completely redefined for themselves, rather early in their careers, a meaning of teacher that privileged student-teacher relationships, enthusiasm for science, and authentic engagement and application of content.
4. The most experienced teachers created meanings of “good teaching” as the ability to maintain student compliance and meanings of students that

emphasized their academic shortcomings. In doing so, they could maintain their views of themselves as “good teachers.”

Participants’ stories add context to what is currently known about science teacher retention in low-performing rural schools. The implications to teacher retention in hard-to-staff schools suggest that the degree to which teachers accumulate autonomy by authoring themselves within and against the widely circulated ways of being increases their affinity to teaching and persisting in challenging placements. Gaining autonomy to challenge the institutional definitions of “good teachers” required participants to find ways to avoid the scrutiny, surveillance, and control in the figured world of low-performing, rural schools. Participants who managed to gain autonomy and challenge the status quo demonstrated a sophisticated understanding of the institutional structures, authored meanings of “good teaching” that challenged existing structures, and leveraged these meanings to push past the narrow ways that “good teachers” were recognized and realized joy in their work.

Storyline #1: Positioning Oneself as Humble Sponges through Donnasue and Anne’s Narratives

Donnasue and Anne are both TfA Corp members who taught science in different school systems. Anne, a second year teacher, taught sixth-grade science (a non-tested grade level) and Donnasue, a first year teacher, taught eighth-grade science (a tested grade level). Their narratives contained a sense of humility emerging from their experience as new teachers in an unfamiliar environment. During our interview, Anne offered advice to me to pass forward to other new teachers entering her school, suggesting, “Be a humble sponge” (1602). Her advice illustrated her reservation to cast judgment and

publically criticize the unpredictability and sources of displeasure she experienced in her school and represented an individual who aligns themselves with the social and cultural expectations within the school. Unfamiliar with the teaching profession and the expectations therein, Anne and Donnasue elected to absorb information and leave criticism for more experienced colleagues. Sloan (2006) claims, as teachers become social producers, they first “read the . . . discourses surrounding them then, construct their own unique understanding, and . . . construct their own self-directed responses” (p. 126). I argue authoring oneself within the institutional practices as a “humble sponge” represents Sloan’s claims that reading the system and deciding how to construct a response became a first step in learning the culture so they can later change it, thereby potentially influencing their willingness to persist.

Anne. Working alongside Anne as I did, she consistently performed herself with intentional reservation to publically question institutional practices or cultural norms and elected to outwardly author herself within these cultural expectations. Privately, however, she was reflective and cognizant of the unpredictability of her surroundings, and in our meetings, she provided ample criticism. For instance, Anne described, “[the] lack of organization requires teachers to do a lot of running around . . . those things should have been presented to us at the beginning of the year . . . we shouldn’t have to go ask” (Interview I, 12/7/12). Additionally, she also described her displeasure with unpredictable interruptions that infringed on her instructional time by stating, “[B]ecause they were making announcements all the time in the class and scheduling assemblies” (Anne, Interview I, 12/7/12).

Despite frustrations with changing schedules and interruptions that led her to feel less prepared for teaching, Anne explained how she thought being assertive might be construed as challenging by her supervisors. She explained her position as a humble sponge, “I would never wanna fight with them [veteran colleagues and administrators] . . . I would feel petty if I was to say something about it” (Anne, 1662). Anne further explained her decision by stating, “[P]art of that goes back to being the new teacher is supposed to be the humble teacher . . . Who are we to tell the administration what they should do?” (2120). Rather than advocating for herself or her students, Anne enacted a position of ‘humble sponge’ to maintain the impression that she was being compliant. Recall Anne’s narrative stating, “[Y]ou have to appease the administration, especially in the beginning” (Chapter V, p. 134). Anne’s decision to reserve public criticism reinforces the powerful influence of compliance in the figured world of hard to staff rural schools. Consequently, Anne persisted by deliberately keeping herself out the watchful eye of her administrators.

Anne, who did not teach a tested grade level in science, was incapable of being recognized as a “good teacher” based upon her test scores. Rather, she realized and decided she could be recognized as a “good teacher” in other ways. Despite her intentions to teach for social justice, give back and value the affective nature of teaching, she elected to author herself within institutional structures to be recognized as “valuable”:

I stay on top of the administrative stuff, if they [grade level colleagues] need paperwork or they need a students’ phone number, parent phone number I have that . . . for my team. I keep everybody pretty organized and I have all the binders and stuff in my room . . . I feel they judge your teaching [value as a teacher] not by your teaching, . . . but because I show up to school on time—not everybody on

my team does—I show up to duty [bus duty, lunch duty, hall duty] and have phone numbers when they need them. Because I’m a dependable school employee they think I’m a good teacher because they don’t have scores to base anything else on. (Interview III, 2/1/13)

The meanings Anne’s associated with “good teacher” guided her in ways that she didn’t previously associate with science teaching. For example, she discovered that showing up on time, keeping her team organized, and providing necessary information allowed her to be recognized as valuable among her colleagues and administrators.

Anne held a leadership role within the school as she was selected to be a part of the School Improvement Team (SIT) during her first year teaching. Although this position is typically reserved for teachers with more experience, it was not uncommon to find first-year teachers occupying similar leadership roles within the research sites. The meanings that Anne made of her inclusion on the leadership team were representative of her position as a humble sponge:

[S]chool improvement team—those kinds of things are like run by those [veteran] teachers. I mean we were on school improvement team last year and didn’t have any idea what was going on, what we’re supposed to be doing . . . we weren’t really sure what the purpose is of this committee. (Interview II, 12/14/12)

Anne felt out of place and powerless by stating, “You don’t have time to tackle the school issues when you’re trying to deal with the stuff in your classroom” (1702). Rather than feeling as though she were an instrument of change as a member of the SIT, she felt as though her involvement on the SIT was artificial and inconsequential. Even so, she served her duty without voicing her frustrations publically and continued to appease her administrators.

Anne's story was not purely exemplary of a 'humble sponge' however. For example, Anne described how she and a colleague enacted collective agency at the beginning of their second year to contribute their ideas to the construction of the school schedule, thus contributing to institutional change:

[Y]ou could've approached it . . . two ways—like full blazes trying to fight everything or like sneak in the back door and try to be best friends with everybody and . . . suddenly get your way. I think we [referring to herself and a colleague] definitely snuck in the back door . . . It's like now I could go to one [veteran teacher] . . . and we can we talk about this . . . I think that's how we've gotten some of the things to work in our favor to be done the way we want them but we don't go through like a formal system [school improvement team] because that's how you piss a lot of people off . . . As a core our group of teachers [we] kind of decided this is how we act. (Interview II, 12/14/12)

Anne found ways to leverage her involvement on decision-making committees, albeit in non-traditional ways. SIT team did not afford them opportunity to voice their opinions, and publically addressing their administrators was perceived as an act of defiance. Instead, Anne performed herself as a humble sponge while developing a feel for the system, and only then did she enact agency by leveraging her relationships with significant others in the school to influence change.

Donnasue. Similarly, Donnasue spoke candidly during our interview about her frustrations with scheduling and testing in her school. For example, Donnasue confessed: "I just get more annoyed with the schedules and the tests and the lack of pure instructional time is really a lot more minimal than I thought it would be." (Interview I, 1/16/13). For instance she noted, "[Administration would] start throwing in these crazy assemblies and then oh, surprise you're going to benchmark for an entire week so don't

really plan anything for this week” (Interview I, 1/16/13). Impromptu scheduling of assemblies, frequent announcements, and phone calls into classrooms, infringed on teachers’ instructional time, resulting in teachers being reactionary in their planning and constraining their autonomy as science teachers.

Additionally, Donnasue provided other examples of things that she felt needed to be changed:

So, there’s a lot of scheduling things I think should be changed, there’s a lot of testing things, I don’t think the pre-benchmark’s valuable in any way, shape or form. It’s just not valuable and I’m not the only one that thinks that. Pretty much everyone thinks that except our principal. So, mainly testing and scheduling and they’re big, big ones. (1721)

Donnasue continued to confess her frustrations by reflecting on student’s testing pressures:

[W]hat I do feel . . . is very inhibiting is the fact that we do this pretest and all the kids fail it . . . They’re almost supposed to fail it because I didn’t teach any of it yet, it’s a pretest. So, in the first place that just seems a little bit dumb to me to have waste an entire week, that’s another thing, it takes up an entire week to send all your kids in to take a test they don’t know any of the answers, they take it and they come to me and they go, ‘Miss [Surname] I think I failed that, I didn’t know any of that’ . . . even though I explained to them, ‘no it’s okay, it’s a pretest you weren’t really supposed to know any of it’ . . . I still think it’s a bad practice to have kids just taking tests of things they don’t know anything about. (Interview I, 1/16/13)

Donnasue felt that the barrage of tests that she was required to administer to her students was they inhibited her ability to teach and carried negative consequences for her students’ self-esteem. However, she remained reserved in casting judgment publically. If Donnasue felt that “this is just the way things are,” her decision not to react is less

consequential. However, Donnasue was less reluctant to challenge the unfair testing practices in our conversations. I asked if she had ever thought to take her concerns to the principal. She responded,

Not really . . . the other teachers have, the ones who are on the leadership team, have voiced things about the quarterly pretests, that's all been voiced a lot so I really don't feel like there's any point in me voicing it again because it's been voiced a lot and it just goes in one ear of our principal and he'll give a little nod and okay and then out the other. So, I don't really feel like there's any point for that. In terms of the schedule I haven't voiced it but I think that I could, I don't think I would . . . I think I would be met with a lot of resistance but I would be willing to explain the benefits and bring it up, I just haven't yet but I think that I could. (Interview, 1/16/13)

Another example of Donnasue's performance as a humble sponge came as she elected not to advocate for herself during a recent post-observational conference with her principal. Teachers in their first four years of teaching are required to be observed four times, one of which is performed by the school principal. One of the six instructional dimensions evaluated during formal observation examines teacher's 'Knowledge of Content' as part of a teacher's evaluation. Following the principal's observation, Donnasue was labeled in need of improvement on this dimension; a conclusion Donnasue objected to, but humbly accepted as judgment of her teaching practice.

Today is when he talked to me about my first observation . . . I was happy because he deemed me proficient in most things but the one thing he chose to not give me proficient was 'knowledge of the content' to which I was like, 'you just picked this out of a hat because if there is one thing I would've argued it would be that.' I have a four-year degree in biology and I just graduated, it's very fresh in my mind. I mean I wouldn't say I'm a genius but I'm not learning these [content objectives] each night like some teachers are [nor am I] saying that's a problem, but I don't have to learn this stuff before I teach it, I *do* actually know it (emphasis in narrative). So, it was a little bit of a shock that out of all of the

categories—I mean he could’ve said that for discipline, he could’ve put me developing for some of the discipline things I would’ve been like ‘amen to that, you’re 100 percent right, I need to work on this,’ but for that one it was just like he just closed his eyes and went [points to the air]—so that was a little frustrating. (Donnasue, 1630)

Voicing her frustration and disagreement with her evaluation to me, yet electing to enact humility during her post-conference with her principal, was illustrative of a deliberate decision to be a “humble sponge.” The subjective nature of teacher evaluation has previously been documented (see Peterson, 2004) and Donnasue’s story provides as example of how her performance as humble sponge served as a resource to persist by internally dismissing her principal’s questionable evaluation and electing not to challenge his evaluation of her teaching, thus serving to preserve her ability to recognize herself as a “good teacher.”

Summary: The significance of positioning oneself as ‘humble sponge.’

According to John Caughey (1984), the significance of humans’ ability to enter into imaginary worlds “can inspire new activities; or paradoxically, their alternative pleasures can encourage escape and a withdrawal from action” (as cited in Holland et al., 1998, p. 49). While is unclear whether Anne and Donnasue’s performance as ‘humble sponge’ represents a withdrawal from activity, or a very intentional activity of aligning themselves within institutional expectations, authoring themselves in ways that allowed themselves to be recognized as “good teachers” allowed them to avoid surveillance and scrutiny circulating in their schools.

Additionally, each had admitted to frustrations with the institutional structures that mediated their practice, yet remained steadfast in their unwillingness to publically

cast judgments or aspersions on institutional structures. Instead, they positioned themselves as humble sponges and occasionally, with subtlety, acted in ways to challenge the status quo. I realized from time with them how their public displays of compliance concealed their true feelings, but became necessary resources to persist in the figured world of low-performing, rural schools.

Arguably, authoring a ‘humble sponge’ position served as a coping mechanism. For instance, each remained publically compliant and nonjudgmental to keep out of the watchful eye of administration while gaining a sense of understanding of what practices were celebrated or condemned in their schools. Consequently, they positioned themselves as ‘good’ by maintaining compliance, and if applicable, producing acceptable test scores. However, their true displeasure and frustration with widely circulated practices and meanings demonstrated their understanding of the oppressive culture of low-performing, rural schools. Still, they elected to remain humble in order to persist.

Storyline #2: Change over Time—Authoring within and against the Cultural Model of “Good Teacher” through Teena’s, Lydia’s, and Phyllis’s Narratives

Similar to their colleagues above, Teena, Lydia, and Phyllis initially authored themselves as ‘humble sponges.’ In doing so, they gained an understanding of their role as science teachers, avoided scrutiny and control while developing a more sophisticated understanding of the positioning forces within their schools. Each began their early careers by complying with practices and meanings by initially resisting an inner desire to act against discrepancies between how they defined “good teaching” and how “good teachers” were recognized. However, over time they began to accumulate more

autonomy by enacting individual and collective agency to broaden the narrow cultural meanings of “good teacher.”

For clarity in presenting participants’ ‘evolution,’ I have elected to separate each narrative to illustrate performances as humble sponges—aligning themselves to socially recognized ways of being. Next, I provide evidence of participants’ developing a more sophisticated understanding of the structural and cultural definitions of “good teaching” that lead to agentic acts that broaden the narrow meanings of “good teaching.”

Teena’s evolution as a science teacher.

First as “humble sponge.” Teena’s story of her teaching experience in a low-performing, rural school began by authoring herself as a ‘humble sponge.’ In hindsight, it was a position she reluctantly took up. Recall Teena’s narrative describing the expectations that she had received to maintain a quiet classes of students (Chapter V, p. 132)⁴.

Teena’s ‘induction’ to teaching science in her placement school consisted of a district-level beginning teacher coordinator handing her a packet of decontextualized instructional strategies with little explanation. For instance, Teena recalled being “given in a packet in a PLC and we talked about them [teaching practices she was expected to use in her class] (2582).” After that they were “never discussed . . . [unless] we were in trouble” (Interview III, 5/21/13). This method of “professional development” and induction positioned teachers as trainable, replaceable, and temporary, in addition, it

⁴ Nobody ever looked at their [students’] work or what they were producing. They [administration] never looked at how rigorous my questioning was or what skill the students were doing . . . [rather, it was] superficial things like classroom management. (Teena, Interview II, 2/16/13)

exposed them to institutional meanings of surveillance, scrutiny and, control. In other words, all one needed to do to prepare new teachers was to hand them a packet of instructional strategies to mechanically implement in their classrooms and they would be recognized as compliant and “good.”

Although Teena understood that being recognized as a “good teacher” meant avoiding scrutiny by implementing mechanical and prescriptive teaching strategies passed along from her colleagues, when I asked why she was reluctant to challenge these preferred practices she responded, “Early on I didn’t want to try anything like that [pushing back or challenging]” (Interview III, 5/21/13). Instead, Teena had authored herself as a ‘humble sponge’ by implementing practices such as posting objectives, data walls, and maintaining student compliance that would distinguish her as a “good teacher” amidst her school context.

In my role as instructional coach, I recommended that she observe other teachers in her school to gain a better feel for the kinds of instruction that was common in other science classrooms. Because she was unsure about her effectiveness as a science teacher, I wanted her to understand that student compliance did not necessarily equate with robust student learning. However, performing herself as a humble sponge, she decided not to observe her colleagues’ classrooms and provided the rationale behind her decision by stating:

It [observing colleagues] was not common practice by a long shot . . . If I didn’t get that explicit invitation, I didn’t feel right asking. It wasn’t encouraged. It wasn’t something that was normal or a part of the culture. So I was like I don’t know how they’ll perceive me if they’ll think I’m being like uppity. I was just very worried about how I would be perceived in that situation by other veteran

teachers. Also I didn't know how it could be used to help me if they weren't my content. I was so concerned about content. (Interview III, 5/21/13)

In time, Teena acquiesced to my suggestions and sought opportunities to observe other teachers in her building. Doing so was a form of contestation, in some ways, because it was not a promoted institutional practice. Ironically, though, the experience reinforced her 'humble sponge' disposition because she found herself lowering her academic and behavioral expectations to meet the level expected by her colleagues. For example, she described:

Teena: . . . the expectations were very low for student behavior.

Patrick: Whose expectations?

Teena: A lot of the teachers . . . and I admittedly did not have as high expectations for behavior . . . my first semester teaching as I should have because I was scared that they [students]—what if they say no. What if I tell them to do something and they say no. I don't know what to do.

Patrick: So were those low expectations, expectations you came in with, or expectations that you took in from—

Teena: I definitely adopted them after I learned—after I was kind of shoved into the situation, into the school.

Patrick: And through what mechanism did you adopt them? How does that happen?

Teena: I think it's just what you see every day. I would go around and watch other people's classrooms, and it kind of became like oh, this is normal. It's normal for them to be talking during their independent practice. It's normal for them to sit there and make jokes and not start their 'do now' when they come in the room. Oh, so that's why they're not doing it for me because it's normal for them. It was watching—it was conversations with other teachers when they would tell me stories of what would happen in their class, and I would draw this conclusion

from it like, ‘oh, well, I’m just asking way too much and that’s why they’re not doing it’ . . . And as a first year teacher, I think you fall into that trap a lot more easily because you have no other experience under your belt. So, I did. I adopted those same expectations, similarly of how I adopted the expectations of the EOC, which is not nearly high enough for my students. So, it goes the same academically and behaviorally. You adopt what you see respectively around you, and I definitely did that. (Interview I, 12/6/12)

Teena’s narrative illustrated the influence of others in constructing her identity as a science teacher and demonstrated her willingness to author herself within the widely circulated institutional practices and meanings of “good teacher.” For instance, recall Teena’s narrative regarding the influence of colleagues who suggested she not “share . . . personal stuff about you” (Chapter V, p. 159). Teena initially accepted this suggestion, but later debunked the advice as glib and contrary to her desired position as a science teacher. However at the time, Teena rationalized why she decided to take up the suggestion by positioning herself humbly, “me not knowing that much about the education world and I’m really just floating along first year, I didn’t fight back or push back on any of that” (Teena, 1044).

I asked Teena to reflect on her early experience by asking broadly:

Patrick: What did it mean to be a teacher?

Teena: Early on it meant like I’m going into this classroom. I’m delivering this content. I’m accountable to my principal for the logistics, the daily expectations that they have of me. It had no further meaning than that just because I was trying to stay afloat. . . . [however], my viewpoints about what was actually important in the classroom changed. Early on, that’s all I could handle. That’s all that was communicated to me. I was here to produce results. I was here for my kids to get 80 percent proficiency on the Biology EOC.

Patrick: So those “I” messages came from the school?

Teena: Yeah. I just think the language that was used was around results of standardized testing not around anything else. Not around, okay, find your identity. You have to find a way to communicate that to your students. You must get them invested first in the fact that you care about them and that you’re here for them. Then you can communicate with them because a lot of these students have trust issues. Like for me, I knew that and I understood that, but I didn’t understand what that meant. I think I also mentioned this earlier.

Patrick: How did you challenge that?

Teena: I guess that was the thing I didn’t feel comfortable challenging when I was in that situation. (Interview II, 2/16/13)

Teena’s response to “what does it mean to be a teacher?” exemplifies a critical juncture in her identity development when she began to debunk the institutional practices defining “good teaching” while still clinging to a safe place by performing herself as a “humble sponge.” After all, who was she to step into an unfamiliar setting and challenge the historical ways of teachers’ activity?

To further the point, Teena reflected on reasons why she elected to align herself with cultural practices by stating,

[M]y interpretation at the beginning was like oh, ‘you actually have a voice if you produce results.’ So I felt at the beginning there was no way that I could take on leadership in the school or nobody would hear me if I was talking unless I had those results to back up my voice. I think later on it morphed into: ‘I have a relationship that is deep and profound with my students.’ (Interview III, 5/21/13)

Owing to the fact that high stakes assessments of student performance are only administered in January and June, Teena’s operated during her first semester without the capital of test scores to validate her teaching reinforcing compliance to validate her

teaching identity. Interestingly, Teena felt silenced because she had not accumulated the capital she felt she needed to voice her opinion and challenge the available positions in her placement.

Teena struggled “find[ing] her identity” during her first semester of teaching. She described how the narrow subject positions constrained who she thought she was or could be as a science teacher because she was advised to remain distant from her students.

[T]hat first semester, I distinctly remember not knowing who I was as a teacher. Or not putting myself into my classroom enough that my kids thought it was authentic. So they couldn't relate to it right away. It caused some problems for me behavior management wise, investment wise. They just weren't invested in me, so they weren't invested in anything I was saying. (Interview III, 5/21/13)

Teena's reflection about the ways her “humble sponge” identity prevented her from realizing the affective rewards that initially inspired her to become a teacher were palpable. Further, it also caused her to question her effectiveness as a teacher. For instance she explained:

I felt like a failure because I wasn't experiencing the same joy and success that I felt in other roles . . . that came easier to me. The fact that I didn't feel success was my focus on . . . what scores my kids were spitting out and what facts they were able to repeat back to me. (Interview III, 5/21/13)

Arguably, Teena had little choice but to perform herself as a ‘humble sponge’ as a mechanism for survival because humble sponges remained out of the administration's crosshairs and the position allowed early career teachers a chance to read the system and perform in individually desirable ways. In other words, producing student proficiency on high stakes assessments, attending to the expectations of administrators, and maintaining

student compliance were lauded practices of early career science teachers. However, by remaining humble, Teena failed to experience the joy she thought would be associated with teaching

As a newcomer to education, Teena recognized how test scores and compliance represented cultural currency that privileged or marginalized one's voice and ability to contest institutional structures. For instance, she spoke of another critical juncture in the evolution of her professional identity by stating:

Teena: . . . Whereas I think a lot of first year teachers and even second year teachers don't have that kind of ability. I think I produced good results my first year, so I had that voice. If I wouldn't have [produced good test scores], I don't think I would have felt like I had a place to say that.

Patrick: So because you got your scores the first semester gave you permission to act upon your feelings of frustration?

Teena: Yeah, I proved myself so I can talk now.

Patrick: Interesting. Was that the general—and I know it's hard to speak about everyone's perception, but was that a general perception within the school?

Teena: I believe it was. The conversation that I had . . . within the community of core teachers, yeah, that was very much like a feeling that everyone had. There were just a select few that had that voice and had the ability to say those things. Whereas if you only got a 55 percent proficiency rating or 55 percent of your students passed, like who are you to tell anybody anything? Even though we all knew that was wrong, that's not what the focus should be. Regardless of who you take that to, no one was going to listen or do anything about it. The non-core teachers were just ignored. I [also] taught Earth and Environmental Science both years. All that data wasn't important to anyone. (Interview I, 12/6/12)

As Teena's story indicates, producing test scores carried influence in her school by opening opportunities for teachers to broaden the narrow meanings of "good teacher" through an enactment of agency to author more desirable positions. However, authoring a position as 'humble sponge' allowed Teena to develop a sophisticated understanding of the ways teachers were recognized as "good." Over time, and with regular instructional support, not to mention good test scores, Teena began to challenge the institutional structures that distinguished "good teachers" from those who were scrutinized and controlled through action plans and regular interrogation. In the following section, I examine Teena's narratives that provide additional examples of her agency as she re-authored what counted as "good instruction" resulting in a more joyful teaching experience contributing to her willingness to persist.

Teena, eventually, reading the system and authoring against institutional structures. According to Holland et al. (1998), a figured world establishes space and time imaginatively in that "one can come to sense after a process of experiencing, acting by virtue of its rules . . . becom[ing] even more familiar with the happenings of a figured world and learn to author their own and make them available to other participants" (p. 53). Teena's past experience teaching science in a hard-to-staff school allowed her to accumulate capital, increase the sophistication with which she read the system, and author herself against institutional structures to teach in ways that were previously unthinkable in her school.

Institutional structures that distinguished “good teachers” described in the previous chapter were also made available to Teena in her placement. Frequent scrutiny of interim test scores was common practice. I asked Teena:

Patrick: How were you recognized as a teacher . . . ?

Teena: So the main way was data retreats when we would share our midterm benchmarks with other teachers and administration, central office, and members of the [school] board. We would basically display our students’ data on that benchmark with projections of whether they were projected to pass or fail. That was how you were measured and validated. If you did not have data that suggested that you were on track, or that your students were on track, you were heavily scrutinized and questioned . . . kind of put before the firing squad.

I saw it happen several times where colleagues of mine got basically . . . got interrogated. Well, ‘why is that?’ ‘What are you not doing?’ Which are all fair questions, but as it seemed a little unfair that was the only measure when we were all staying after school for tutorials. We were all going above and beyond. We were driving students home. When we would go to a data retreat, it was expected that I prepared something for Biology. If I would have prepared something for Environmental [Science], no one would have given two rats’ behinds about it. They send a very clear message. These are our priorities because this is what this state cares about and we’re going to focus on this only. (Interview II, 2/16/13)

According to Teena, what *mattered* was test scores associated with tested subjects and grade levels; others, like the performance of her Environmental Science class, were ignored. Teachers’ going “above and beyond” was deemed inconsequential by administrators if test scores failed to increase appreciably. However, teachers who tried to establish relationships with students by promoting academic growth in pursuit of teaching for social justice were thwarted by the powerful influences that test scores had on the ways teachers were positioned. For instance, Teena recounted:

We felt like we were doing all that we could at that moment. It was really disconcerting even though I wasn't necessarily one of those people that got that interrogation, it was hard to watch a fellow first year teacher get put under the microscope like that. (Interview I, 12/6/12)

Test scores represented differential capital used to define how teachers were recognized and positioned themselves as “good teachers.”

If your students were producing [test] results, then you were doing the right thing in those 90 minutes. If they weren't, you must be doing the wrong thing. When in reality, it could've been one in the same—two teachers doing the exact same thing producing different results . . . that was the message from the administration. (Interview I, 12/6/12)

However, Teena's skepticism was palpable indicating her internal questioning of what was valued in her school and how those systems of values impacted her willingness to persist. For instance, I asked her:

Patrick: Can you recall a moment or a period in your teaching that was most challenging?

Teena: I think collectively when I look back at what I was most frustrated about was and is the like the rigid structure that existed in my school as far as like administrative expectations, social promotion, things that happen that shouldn't happen. The constant focus on proficiency instead of growth. Those focuses I thought were really frustrating because two fold. They really impact culture in negative ways. Culture of teachers, culture of students because it's a culture of pass/fail.

It's not a culture of we're going to grow and get better together and, no, you're not a great teacher right now; but you're going to get better. No, my kids aren't where they need to be, but I'm going to recognize how far they've come instead of who gets this raw score on the exam. That was most frustrating I think because I saw just in language that students would use around like well, I'm not smart. I can't do this. Them being in tears for getting a 55 percent, barely passing the EOC even though that's wonderful, but what's communicated to them is the bar.

That's what is communicated to teachers as the ceiling when that should really be just the beginning. We should be going beyond that bar. No matter who you are, you should be growing in this environment, [but] that's not the focus. The focus is let's do what we have to do to have the state say, 'yes, you've met your growth for this year.' Or, 'yes, you're okay. We don't have to come in and take over the school.'

I should give the school district the benefit of the doubt on this, but I think as a teacher I was like well, they don't really care about what kind of people my students are. They don't really care about who's growing and who's not. They just care about the results. That's all they care about. In this situation, that's how it feels when you're teaching in that environment. (Interview I, 12/6/12)

Teena's willingness to persist was challenged by a "pass/fail" culture that reinforced proficiency over growth, rigid administrative expectations, and social promotion. Collectively, these challenges contributed to meanings Teena constructed that teachers were appreciated by the numbers they produced rather than as individuals with the potential to become distinguished teachers. Armed with a more sophisticated understanding of the system, Teena provided examples of the ways she authored herself against institutional structures by stating:

Teena: [A]fter my second semester, they [district and school administrators] were pretty much like, [do] whatever you wanna do, just because I had shown my stuff.

Patrick: What does that mean?

Teena: I mean, well, I got good test scores. That was it. And I had no write-ups. I didn't write students up. Everything was handled in my classroom. When people would come in, they would see my students doing—compliant and on task, even in second semester. First semester was definitely not like that, but second semester of my first year, I had a good group of students. A different group of students than my first

semester, and they were a lot more receptive because they were a lot younger. (Interview I, 12/6/12)

Maintaining test scores and compliance represented capital, which Teena leveraged to gain latitude in her instructional performances. Teena's accomplishments gave rise to acts of agency that enabled her to teach in more authentic ways to broaden the narrowly constructed meanings of "good teacher." Further, she was able to practice herself in ways that promoted social justice, an endeavor that initially drew her to education in the first place.

Teena rejected compliance and test scores as indicators of successful practice and instead drew upon the relationships and feedback she received from her students to recognize her teaching as "good." For instance, Teena reflected on an experience when a group of students she taught during her first year, returned with stories of their success in college.

I taught that group of Advanced Biology students [during] my second semester [of] my first year. And that class, I felt was the closest thing to a real Intro to Bio, or a college class that was discussion-based and writing based and evidence-based. And then, I think in my second year, I talked to a lot of those students who had went away to college and they were like, 'Man, Miss [Surname], everything you taught us was there, and we saw it. And it was a lot harder, but we knew it. And we knew where it was coming from. And I did a great job on my first exam.' And it was, that was indication to me because in that Advanced Bio class, I had pushed hard. And pushed harder than my regular Bio, and I think those, coupled with what I said before, those two things were my driving force behind this shift. So, I don't know if that kind of completes the picture. (Interview I, 12/6/12)

Teena continued with a similar story during our second interview describing some of the changes to her practice that contributed to her students' preparation for success

beyond high school. Interestingly, her accomplishments were substantiated not by test scores, but through the testimonials of her students:

I think seeing my Advanced Bio kids coming back to me who I approached my second semester with a much more holistic view of how are you going to be ready for the real world in your culture and college. I think we worked together a lot on what that looked like—Socratic seminar, article [studies], annotation and stuff like that discussion based classes. Having those kids come to me over the summer or during my first semester as a second year teacher and saying, ‘oh, my gosh. Ms. G, like you wouldn’t believe it. Everything that you talked about in Bio, we are talking about right now. It’s a little bit harder, but I’m doing good.’ To me that was evidence that things I felt: scientific journal and organizing your thoughts in it in a way that makes sense to you on a page, taking your own notes, interpreting things, that was all high priority. (Interview II, 2/16/13)

Teena broadened the narrow meanings of “good teacher” by pushing past the practices used to distinguish “good teachers.” Instead, she drew upon the validation of her students, their success in college, and the relationships she was able to forge with them in order to recognize herself as a “good teacher.” Her agency was also displayed as she took the teaching methods that she honed with her advanced students and distributed them to students in classes that were tested—a risky move considering the importance of the performance of these students. For instance, Teena spoke of the ways she altered her teaching practices in her Biology class to privilege the voices and experiences of her students, impress upon them the relevance of the science topics, and maximize their engagement with scientific phenomena. She found that replacing the maintenance of quiet, compliant students capable of recalling facts, with timely and relevant conversations was in the best interest of her students. She described the changes to her teaching practice:

Discussing things, asking questions, and then we posed a question to the class about something and we discuss it right then. We don't wait. I think it changed not a ton about the structure of my class, but the way I went about teaching and delivering the content itself making it more relatable. Things that kids would talk about instead of 'here's what mitochondria is. Here's what it does.' (Interview II, 2/16/13, 1164)

In addition, Teena's teaching included helping students persevere in the face of adversity and empowering them to become advocates for themselves as she continued to describe:

Things that I think were relatable to the students. Skills and mindsets, I know you're frustrated right now, but you need to get over it. You need to work through this and find the answers for yourself. I'm not going to help you. You can ask Sue sitting over here on your right for help. You need to ask two other people before you come and ask me again. (Interview II, 2/16/13, 1148)

Promoting student discourse was a departure from the ways "good teaching" was recognized in her school. Remember Teena's statement of the realities she faced, "[I]f your students are talking . . . they are not learning" (Interview II, 2/16/13) or "If you have a quiet classroom, you have a successful classroom (Interview III, 5/21/13). Acting against these circulated meanings of "good teaching" by promoting student conversation illustrated her agency in authoring herself against institutional structures. Additionally, Teena authored against institutional practices of test scores by celebrating student growth. This represented a distinct departure from the pass/fail culture she experienced in her school:

From all of my students, I wouldn't accept work until I thought it was up to my standards. So that forced my upper students to write better. Also my lower students, they could write better; but I differentiated my grading in a way that helped them feel successful and it didn't feel like I was giving them minus five. Oh, you only got five out of ten. Like 50 percent, boom, done. It was like 'why

don't you take these pieces of feedback that I'm writing on your paper, do it over, and hand it back into me.' I'll give you full credit—that was your suggestion by the way. (Interview II, 2/16/13, 1340)

I had worked with Teena since she arrived at her school and experienced, first hand, her, frustrations, struggles, and desires to grow as a science educator. I did what I could to support her and one way was to help her to establish a growth mindset in her classroom. Doing so required an understanding of the structures used to distinguish “good teachers” and allowed them to avoid scrutiny and control. My work with Teena was also reinforced by an assumption that changes to her teaching practices were co-constructed in an effort to produce results that *she* valued and desired. Although I did not set out to examine the impact of my work on science teacher's willingness to persist, the support that I provided science teachers emerged as being important in broadening the narrow meanings of “good teaching” and promoting teacher persistence.

Summary: Teena's evolution as a science teacher and its impact on her willingness to persist. Teena's story of persistence followed a trajectory that began with her authoring herself within institutional practices as a “humble sponge.” Doing so allowed her to avoid scrutiny by being recognized as a “good teacher” by administrators, district officials, and colleagues. The discourses that were most influential to Teena during the early stages of her career came from the adults in the building and judgments of teaching were based on student compliance, bell-to-bell instruction, posted agendas, and test scores. Interestingly, authoring herself within the institutional structures contributed to her perception that school was an “unhappy place” because she felt

powerless to change the culture, which seemed so unfair to children and teachers in her school.

As Teena read the superficiality of structures that were inconsequential to student learning, she began to teach in ways more aligned with her vision. Buoyed by her test scores and performances that produced student compliance, Teena began to author herself against the widely circulated practices and meanings that distinguished “good teachers.” For example, she began to experiment with novel teaching practices that contributed to engaging students in authentic learning and by challenging students with instructional strategies that were less widely circulated. These moves resulted in positive testimonials from her students. The discourses that mattered to Teena in shaping her identity as a “good teacher” had shifted from the adults in her school, to discourses emanating from her students that came in response to her experimenting with less circulated teaching practices, which led to a more satisfying teaching experience.

Lydia’s evolution: First, as humble sponge, reading the system and then, enacting her agency. Lydia’s ‘evolution’ as a science teacher followed a trajectory similar to Teena’s in that she entered the profession untrained and unfamiliar with the practices and institutional structures found in hard-to-staff schools. For instance, she recounted her initial experiences as a first-year teacher by comparing it to her present experience:

Patrick: Anything else that was kind of shocking that you had to get used to in your current placement as a new science teacher?

Lydia: I guess just like what is tolerated, like behavior-wise . . . last year, I had to deal a lot with like, ‘oh, he [student] just pretty much ripped me a

new one,' and I sent him out. And they're [administration] telling him he needs to come back in my room, and he sitting there snarking [smirking] at me, and I can't do anything about it. That was just very degrading.

Patrick: This is last year?

Lydia: Yes.

Patrick: And how do you—

Lydia: This year, it's kind of like, 'Oh, you think you're gonna bring him back to my room? No, not gonna happen.'

Patrick: Ah, so where does that come from?

Lydia: I think just having a little bit more confidence in myself.

Patrick: Where does that come from?

Lydia: Just experience, I think, and knowing that I was a first-year teacher, and they knew that they could shove him back on me, and I wasn't gonna do anything because—

Patrick: Who are 'they'?

Lydia: Administration or—I don't know even know what they're called—Dean of Students?

Patrick: Right.

Lydia: ISS [person in charge of In-school Suspension]. Knowing I wouldn't push back on them for many reasons, and this year, it's just kinda like, 'No, I'm not gonna take him back. I'm sorry. You're not gonna do anything to me.'

Patrick: How is that communicated that to you—are those explicit messages?

Lydia: Um-hum, because I will tell them. I will say, 'I am sorry. He or she is not allowed back in my room because they have, first of all, taken away my authority. They've disrespected me, and you all talk about respect. It's not gonna happen.' And then they usually just shut up real quick because they know that they wouldn't wanna take that, and they don't come back.

Patrick: Okay, so that's really what I'm trying to get out in this whole idea of teacher retention. How do I pass that epiphany along to pre-service teachers who are in school right now?

Lydia: But I think if you would've told me that last year, I wouldn't have done it because I wasn't trying to be the person to go in there thinking I knew everything; I wasn't gonna ruffle some feathers. I'm not that type of person. I think, last year, I was just trying to figure out what was going on. And as the year went on, it got better, but I still had to deal with all that mess.

Patrick: And it's how you deal with that mess? That's what I'm really curious about.

Lydia: I'm really good at being sneaky—no. It's just like you figure out the points that you can push back, and there's not gonna be any repercussions on you because you know you're right, and then these other people are telling you you're wrong, and you're like—that was so hard for me to be like, 'He just called me a bitch, and you're allowing him back in my room? That's saying that I have no authority in this classroom.'

I'm only a second-year teacher, but knowing that that is what needs to be done in order to keep control of the rest of those kids, it's like, 'I'm sorry. I'll go down for that. Go ahead. Reprimand me.' But if you would've told me to do that last year, I wouldn't because I wasn't trying to be that person to stick that bull's eye on my head first thing out of the gate.

Patrick: So you think it was just experience?

Lydia: And just trying to be aware of what goes on around you to know what is really tolerated, I guess. (Interview I, 12/7/12, 1167)

By Lydia's account, she had to survive through unfamiliar student discipline issues and felt victimized by the decisions of others in her school. Not wanting to "ruffle feathers" by challenging the cultural practices in her school, Lydia accepted the notion that discipline was largely hers to manage.

However, in Lydia's second year, armed with a better understanding of how to push back by leveraging "respect" and taking a firm stance of her authority, Lydia enacted agency by utilizing appropriate language to advocate for herself despite the inherent risk of exposing herself to reprimand by her administrators. Unlike Teena however, Lydia's agency was not a product of test scores or student compliance. Instead Lydia's agency was a product of a more sophisticated understanding of the potential consequences and the level of tolerance she witnessed among her administrators. As a result, Lydia authored a position giving her more control of her activity to feel less taken advantage of.

Lydia provided additional examples of a more sophisticated understanding of institutional structures found in her school and responded less like a humble sponge and with considerably more agency.

Patrick: Do you find yourself operating now from a position where you just have to do whatever it is you're supposed to do? Or you have a little bit more freedom and—

Lydia: In some things. Like, they want me to have a data wall. Okay, I have a data wall. Do I keep up with this—measure that shit? No. Do I pay much attention to it? No, but it's in my room just taking up wall space. Do the kids care? No.

Patrick: It doesn't really have much purpose?

Lydia: No. But it's up there, and then my principal walked in my room today and checked my walls, and it was there.

Patrick: And that counts.

Lydia: And that counts.

Patrick: Are there any other things that really count that seem menial or trivial?

Lydia: Walking on the blue line, does that count?

Patrick: What is that all about?

Lydia: I have no idea.

Patrick: So the kids have to walk on a blue line –

Lydia: Yes.

Patrick: —when they walk down the hallway?

Lydia: And it is like pulling teeth because they don't wanna do it. They don't wanna be quiet in the hallway.

Patrick: Yeah, but that's the expectation.

Lydia: Yeah. And if my kids are on the blue line, I'm good to go.

Patrick: Don't necessarily have to be learning anything.

Lydia: No.

Patrick: But as long as they're on the blue line, it passes.

Lydia: As long as they're on the blue line.

Patrick: Did that take a lot of getting used to as a new teacher going into that school?

Lydia: Oh, yes, because when I was told something, I did it.

Patrick: And last year, when you were told something, you did it because you were still a pleaser.

Lydia: Yeah.

Patrick: If they said, 'Make a data wall,' you did a data wall. Kids walk on a blue line; you walk on a blue line. Would you say you have—Catalyst, direct instruction, independent practice, closure, and you did it?

Lydia: Yeah.

Patrick: Are you doing all that stuff lockstep now?

Lydia: I have my—all my little things on my board that I need to have every day, but do I explicitly go through each of them? No.

Patrick: Um-hum. Do you feel more freedom as a teacher?

Lydia: Oh, yes. (Interview I, 12/7/12, 1359)

Admittedly, Lydia was a “pleaser” (101). She described wanting to please her parents, her teachers, and now found herself wanting to please her supervisors and students. Consequently, it came easily for Lydia to author herself within institutional structures to avoid scrutiny. However, merely complying with the institutional practices prevented her from recognizing herself as a “good teacher,” which challenged her willingness to persist.

Lydia managed to exert some control over her surroundings by authoring herself against the institutional expectations of teachers thus allowing her to feel more accomplished as a science teacher. Similar to Teena, as Lydia gained an understanding of the institutional structures that defined teachers’ practice, she took advantage of opportunities to broaden the narrow meanings of “good teacher” by subtly opposing institutional practices of “good teachers.” For instance, posting agenda items on the board and presenting student data on the walls allowed her to be recognized as a “good teacher” even though she did not attend to them with enthusiasm or fidelity.

Lydia provided another example of how she gave the appearance of “doing what she was supposed to do” to gain recognition from her administrators, while simultaneously enacting agency to gain control over her identity production:

Patrick: How do teachers make sense of the rules that are thrust upon them?

Lydia: Oh, okay. I guess maybe like they want us to make parent contact, and I'm terrible at calling parents because I'm not gonna sit there and call parents from my house because I don't think that's fair to me. So what I do is I send notes home. They don't ever make it back, or if I say, 'This is your homework. Get your parent to sign it—read it and sign it,' the parent will sign it.

But of course, they didn't read it, because I have it on there saying, 'If you would like more extra work for your student, if you'd like your student to have some time with me to go over things, contact me.' I never get any contacts, but I made that parent contact. They didn't tell me how I needed to do it, but I did it. Was it impactful? Absolutely not . . . But I did what I was supposed to do. (Interview I, 12/7/12)

In her second year of teaching, Lydia had leveraged her understanding of the practices and structures that gave rise to meanings of “good teacher” school to push back against an oppressive system that caused her discomfort from merely coming to work each day. Interestingly, but not surprisingly, her relationships with her students also improved, as she began to teach science in more authentic, creative, and meaningful ways. For example, Lydia described her feelings when students were able to apply science to their everyday lives, “I just love that. I love that, and I think it happens more this year than it did last year” (1900).

Lydia's perception of herself as a “good teacher” and her job satisfaction had improved during her second year of teaching. For example, rather than getting preoccupied with the institutional practices and structures that defined “good teaching,” Lydia began to reflect on her teaching practices broadening the narrow meanings of “good teacher” in her school. For instance, I asked Lydia to describe what she now perceived as an ideal lesson:

Lydia: I pretty much, when I do my reflecting, it's like, 'Okay, how did I feel during that lesson? How do I think my kids did? What did I see on their faces? Did I have a conflict in this class?' Because if I usually have a conflict, that means that either the class was terribly boring, or they had no clue what was going on, and they were just [lashing] out because that's what they do. They're middle schoolers. They have to be doing something, and it's just like, 'Oh, okay.' That's how I think about my lessons.

Patrick: And it sounds like you're doing a lot more reflecting now. Did you do a lot of reflecting last year?

Lydia: Well, I would pretty much put it out of my brain because I didn't wanna relive that . . . Yeah, and it's just like, 'I know this needs to change,' and I'll try it again tomorrow. (Interview I, 12/7/12)

Like Teena, Lydia's validation as a "good teacher" emerged less from her administrators and more through the responses of her students to her instructional methods. Data walls, exit tickets, agendas, and walking on blue lines became less central to meanings of "good teaching" and the resulting freedom positively impacted Lydia's sense of herself as a science teacher. And, although Lydia's identity as a "pleaser" persisted, experience, along with a willingness to try new teaching strategies contributed to a greater sense of autonomy and opportunities to enjoy the affective rewards from teaching.

Summary: Lydia's evolution and its impact on her willingness to persist.

Lydia's narrative follows a similar trajectory to that of Teena's. Like Teena, Lydia authored herself as a humble sponge to avoid "ruffl[ing] feathers." Similarly, she remained out of administration's watchful eye by posting required artifacts, accepting misbehaved students back in her class, and submitting lesson plans to avoid being "fussed

at.” Lydia’s narratives of her first year teaching revealed her evaluation of herself as a “good teacher” was influenced by the social practices that distinguished “good teachers.”

With experience, Lydia developed a more sophisticated understanding of the institutional practices that defined “good teachers” and how they served to position her. Consequently, Lydia learned to play the game to avoid scrutiny electing to enact agency to ‘push back’ where she could. Lydia constructed meanings of institutional structures as artificial, superficial, and seldom related to student learning relegating them to contestation. Lydia authored new ways to handle disruptive students, contact parents, display data walls, or teach in more creative ways that privileged the application of science content. Further, her assessment of herself as a “good teacher” emerged more through reflections of her practice rather than the opinions of others. For example, student’s responses to her instruction figured more prominently in her recognition of herself as a “good teacher.”

Lydia’s evolution from being a “humble sponge” to enacting agency came as a consequence of her experience and knowledge of the rules of the game, which resulted in a greater affinity for her job. Recognizing herself as a “good teacher” by obtaining greater control even if it meant “being sneaky,” were critical, hard-won accomplishments that contributed to her ability to appreciate the affective rewards of teaching.

Phyllis’s evolution as science teacher: Portrayal of humble sponge.

Phyllis reflected on her initial experience teaching eighth-grade science in a low performing middle school by speaking to the institutional practices that distinguished “good teachers.” Being new to the community and education in general, she spoke of her

initial reservation to challenge institutional structures and elected to author herself within institutional structures:

[Y]ou're new to this community, . . . you're gonna wanna make changes, but you gotta . . . feel it out and get respect . . . kind of a mindset . . . I thought we let ourselves get pushed around but [now] we don't, like those first couple of weeks at school like even now, we don't know. Not that we don't know any better but like we don't wanna push it. You don't wanna get on their bad side. (Interview II, 12/14/12, 1611)

Phyllis described the institutional structures that allowed her to be recognized as a “good teacher” by stating:

There are very strict guidelines set out for how your classroom and how your board should be set up. You have to pose a big essential question and that sort of thing but . . . I don't think there's a common sense or very clearly communicated expectations of like ‘okay you give them the essential question’ like what do you do for the next hour. Like ‘how do you address it, how do you answer it,’ that's kind of arbitrary stuff. Have your objective on the board, have your agenda on the board. Those expectations are very clear and do literacy strategies and incorporate some arbitrary stuff that may not be best for the kind of content you're teaching but . . . you're expected to do those on a regular basis. (Interview III, 2/1/13)

Like many participants, Phyllis was new to the role of science teacher and understood little of the institutional practices that influenced teacher's actions. In response, she initially elected to author herself as a “humble sponge” as a survival tactic while gaining a more sophisticated understanding of the institutional practices and meanings that distinguished her as a “good teacher.” While this strategy allowed her to persist on a day-to-day basis, it also conflicted with her ability to recognize herself as a “good teacher”:

Part of that goes back to being the new teacher is supposed to be the humble teacher. Like who [am I to tell] administration what they should do for professional development? Like I spent all of last year feeling like I was the one, the crazy one . . . thinking that we need to work on school culture like you think the administration has it together at first and you think all right, well, maybe we should be focusing on these research based instructional strategies, . . . [however], me struggling in my classroom just kind of gets washed over. (Interview II, 12/14/12)

Like other science teachers, Phyllis spoke of the changing schedules in her school that created a lack of accountability for teachers and students and resulted in student discipline problems. For example, she described her general sense of the pattern of changing schedules:

I mean behavior is so much worse when the schedule's so off the wall...those kids have no expectations for the hour . . . the kids know it's unstructured because they know it's not your time or they know it's scripted. They know it's kind of like 'whatever' and you're kind of 'whatever' about it. (Interview II, 12/14/12)

Phyllis's dismissive claims toward the shifting schedule and unstructured times were apparent with words like "whatever" is, in my interpretation is representative of a humble sponge position because she elected not to act against or challenge, but comply with a set of institutional practices. As she continued, it became apparent that challenging these institutional structures was futile making it just as easy to grin and bear it. For instance, she described:

And a lot of times if you bring up a problem or like suggest a solution but it's not totally thought out, it's kind of like you have to like bring me the blueprint more or less and to be honest like sometimes you just don't have time for that. You don't have time to tackle the school issues when you're trying to deal with the stuff in your classroom as a first or second year teacher. It's like all right, fine. I can't think about how we need to change reading block or intervention school

wide. I'll just deal with them for another hour every day. I'll print one more math worksheet and just deal with it . . . I don't feel like I'm the best lesson planner, I feel like I'm really good at delivery but I'm not the best planner . . . I don't feel like I'm getting anywhere with support in my district. Except for you. (Interview II, 12/14/12)

Authoring herself as a humble sponge allowed Phyllis to be recognized as a “good teacher,” but created a crisis of confidence by preventing her from recognizing herself as one. The unpredictability of school schedules and a lack of support prevented her from being as prepared as she intended to be to teach science or design and present alternatives for the existing schedule. Consequently, she initially authored herself as a humble sponge and “print another worksheet” to make it through the day.

Phyllis, eventually, authored herself in more agentic ways. Constrained by state curriculum, district pacing guides, interim measures of student performance, and frequent abduction of instructional time, Phyllis was unable to recognize herself as a “good teacher.” For example, Phyllis described the lofty, and perhaps unrealistic expectations placed on a first-year, lateral entry teacher by stating:

Phyllis: I felt the pressure because I feel like all my kids should pass. I feel that I'd get them to pass, if not all of them, the majority [of them]. I'm also expected to bring the school scores up . . . If didn't get high enough, I was gonna be reamed.

Patrick: So like in trouble, as if like you could lose your job?

Phyllis: No, but like you're put on an action plan or –

Patrick: I see. So that's a real pressure?

Phyllis: Yeah, I mean not this year. (Interview II, 12/14/12)

Phyllis's story resembles the stories of other teachers described in the literature that criticizes test-based accountability systems (see Flores & Clark, 2003) in that she describes the stress and frustration associated with assessment results. In her first year she reluctantly accepted the position of science teacher responsible for raising all of her students to a proficient level through strict adherence to the curriculum and pacing guides.

In her statement, "I mean not this year" foreshadowed her description of a stark contrast between who she was as a teacher during her first year to who she had become during her second. Owing primarily to a sophisticated understanding of the school culture, namely the practices and structures that distinguished "good teachers," Phyllis elected to abandon the position humble sponge to author a teaching identity that challenged institutional structures, which served to broaden the meanings of "good teacher." For instance, she described:

No, I mean there's still pressure but . . . I'm more trying to get the kids to be better readers. Hopefully that translates into the test scores but I'm just like I guess this year I just seem like 'whatever,' they'll pass the test even if they need to know how to read and you know write and I'm gonna do everything I can. I'm gonna continue teaching the curriculum like I did last year but I'm gonna focus on different things rather than drilling them with the facts of what does it mean to be a malleable metal you know because at the end of the day, they're gonna forget that next year. (Interview II, 12/14/12)

Phyllis's agency allowed her to abandon the "drilling" of science facts as an acceptable instructional method and replace them strategies that promote science literacy. Similarly, she provided an example of how she altered the content she taught and the time

that was prescribed to teach science objectives by designing a student project that she would have never thought to execute the year before.

And that's how I feel like I came into this wanting—and we said this last time—like I wanted to do labs. I wanted lab reports, even like that project⁵. That's an example of me like caring to see. I would never have done that last year because that was like a week and a half of time that I was not teaching the objectives. This year, I'm just like, whatever, if I miss the last unit, I miss the last unit . . . I'd rather them have exposure to this—but even still, I should've given them more time on that project. It would have gotten a lot better, but I didn't. I'm only gonna be spending a week and a half on this and that's a lot of time already so let's go. We gotta move. . . . [Y]ou know, I don't do labs very often because that's something I think that could be developed into something good but it's gonna take time . . . so I just am like 'it's gonna take too long and I don't have the instructional time for that because they [students] need to pass' [the state test] . . . I'm conflicted about the whole testing because obviously they should be able to pass as it's not the most rigorous test in the world. What if I spend my time focusing on these other skills and they didn't learn what they need to pass the test? I don't want that either. So it's a lot of decisions and I don't really know . . . because I'm not an expert. (Interview II, 12/14/12, 1947)

In her second year, Phyllis authored herself less within the institutional structures and took opportunities to subtly challenge the existing structures used to distinguish “good teachers.” Consequently, authoring herself less like a humble sponge allowed her to recognize herself as a “good teacher” because it meant teaching in ways that were more meaningful, involved, and permanent for her students. Phyllis's authoring against the “drill and kill” pedagogy that was celebrated in her school resulted in extending instruction beyond the suggested timeframe to promote content understanding.

Additionally, Phyllis described taking opportunities to teach in ways that reinforced the

⁵ With my support as Phyllis's instructional coach, we designed a research project that allowed students to explore alternative energy sources would meet the growing demands for energy in their area. While the content was included in the state curriculum for eighth-grade science, the pacing guide only allocated 2-days to teach about alternative energy sources.

relevance of science for students and in doing so, temporarily cast aside pacing guides and testing pressures to pursue deeper and more meaningful conversations with her students. For instance, she described a new way of thinking as she approached lesson planning:

I'm gonna go in more depth or digress [diverge] slightly I'm gonna do it in something that's gonna relate to them and they're gonna care about it because it's something that they can see in the real world or I can make connections between the discipline of science, that's what I do sometimes just like I'm gonna do an extra lesson, I get an extra lesson in human effect the ecosystems, which is not at all in the curriculum but we do ecosystems . . . so I was like this would be something that's interesting for them at the time instead of talking about it and it's important for them and their lives so if I'm gonna digress [diverge], that's how I'm gonna do it. (Interview III, 12/1/13, 2384)

Phyllis authored herself against the institutional structures that reinforced adherence to pacing guides and the curriculum resulting in her ability to recognize herself as a “good teacher” not for following the pacing guide and completing instructional objectives on time, but by developing students’ interest and ability to engage in dialog about science. This is an example of the hard-won victories that science teachers in hard-to-staff schools are able to achieve in order to capture autonomy and recognize themselves as “good teachers.” Given the surveillance and scrutiny found in her school, Phyllis’s acts of agency are no small feat. Teachers making seemingly mundane changes in their teaching must first understand and overcome larger institutional structures used to evaluate teacher performance and influence their practice. Nevertheless, based on teacher narratives, these acts of agency are significant for teachers who are able to persist daily in low-performing, rural schools.

Phyllis's agency extended beyond her instructional decisions associated with pacing guides and assessment. For instance, Phyllis spoke of her response during her first year to the shifting expectations of teacher's performance that were common to her school. Oftentimes, her principal would make demands in faculty meeting requiring teachers to "drop everything" and complete a series of tasks. Phyllis's narrative reinforces the dynamic nature of her school as a source of considerable frustration and sleeplessness:

I show up in a faculty meeting and they're [administration] like, 'you need to have this done by Tuesday, this done by Wednesday, this done also by Wednesday, this done by Friday and they all need to be done because those are the deadlines.' I'm like 'why didn't you tell me this two weeks in advance so I could've plotted it out?' I used to freak out every time I went to that meeting. It's like, 'oh my God, I'm not gonna sleep for the next four days. I feel like I've almost adopted the mindset that I was trying to describe earlier that I didn't like⁶. (Interview I, 12/7/12)

Reflecting on similar experiences during her second year, Phyllis's response to shifting administrative requests exemplifies her authoring against institutional structures and demonstrates a more sophisticated understanding of the structures through which teachers are evaluated in her school:

I'm like 'well, I'm not gonna do that because I literally don't have time to do it' so I'm gonna do whichever one's the most important and . . . move on but that's kind of the only way you can. When it's . . . presented to you, there's just . . . no forethought or anything. Instead of giving this a two-week notice, they're saying this is due [at the end of the] week. [It's as if administration said], 'Oh, crap, I

⁶ Phyllis had made a statement of judgment of veteran staff members who seemed to disregard the principals' requests and failed to tend to their professional duties. As Phyllis described, "there are some teachers that just like don't care a whole lot . . . that's not the work ethic that I . . . have grown up with" (720).

just realized the deadline is tomorrow so like you guys need to get this done by tomorrow,' if that makes sense. (Interview I, 12/7/12)

Phyllis's agency was prominent as she continued describing the ways she authored herself against institutional structures she read as inappropriate. For instance, regarding the expectation that "literacy strategies" be included in teacher's lesson plans, Phyllis described her response:

Sometimes I put them [literacy strategies] in my lesson plan and have them so that if someone walks in I can do them but I don't think they're the most valuable use of the time in my classroom so when no one's in there watching me, I don't do them. (Interview III, 2/1/14)

Phyllis's autonomy was produced as she learned the rules of the game and hedged her performances in ways that would keep her out of the watchful eye and scrutiny of her administrators. Additionally, she had authored similar performances to gain more control over "non-negotiable" teaching practices that influenced her teaching and her identity as a science teacher.

That's another one where I take liberty, I have an exit ticket every day ready to go meaning having a question on the board that they can write down but I don't always do them, I probably shouldn't say that. (Interview III, 2/1/13)

Like Lydia, who superficially aligned herself with the institutional structures (i.e., they were nothing more than behavioral practices as opposed to contributing to shifts in meaning making), Phyllis enacted agency in similar ways. Electing not to comply with celebrated practices as long as no one was looking, is indeed agency, however, she remained provisionally at their mercy because she had these celebrated practices prepared

in case of inspection. These acts of agency, I argue, demonstrated ways she protected/preserved her own identity and in the process, reinforced her willingness to persist by gaining autonomy over her teaching practices and broadening the cultural meanings of “good teacher.”

As I have described earlier, good test scores were an essential marker of “good teachers” in nearly all instances. Similarly, an individual’s sense of themselves as “good teachers” was provisionally tied to assessment results. However, the frequent errors found in development and scoring locally developed benchmark assessments produced ambiguous results for teachers and Phyllis’s experience describing her response to benchmark results following a recent assessment provide evidence of her agency and willingness to author herself as a “good teacher” in spite of the data produced by interim assessments. In her second year, her familiarity with the curriculum and the terminology associated with testing and accountability were evident as she enacted agency to author herself as a “good teacher” despite what her test scores demonstrated. For example, she described how her response to benchmark test scores resulted in an ability to broaden the narrow meanings of “good teaching.”

Phyllis: If my [interim benchmark] test scores are low and I can be like ‘okay I walked around during this test and half of these questions . . . asked about some random chemical’ and asked ‘if that was in water what would it do?’ I’m not really sure how accurate they were . . . they’re [school administrators] are like, ‘okay.’ I don’t know if they’re hard on other teachers but I can usually like say something and they’ll [district and school administrators] believe me. They take my word for it. I’m honestly like ‘I looked at the question I sure hope that doesn’t show up on the EOG . . . I don’t know what it is, it’s not in the standard course of study or not in the Essential Standards . . . I don’t know what objective this is aligned to’ and I can like say that to them

[administrators] and they'll all like be fine with it and I'll be like 'okay like well let's see the next time around.'

Patrick: And you attribute that credibility to—

Phyllis: Being labeled as a good teacher. But I also guess I don't know how I'd be received if I wasn't.

Patrick: That was my next question what does it mean if you're not labeled a good teacher, you talked a little bit about you're sort of a target, you might be picked on?

Phyllis: Yeah, but it might just also be like if you're new, you're targeted. We earned our keep last year.

Patrick: Do you feel like you were targeted last year?

Phyllis: Yeah. . . . I don't know if you heard this happen today but our principal started to send an email right after break that said, 'I want everybody's lesson plans on Friday night for the following week,' it's like I don't make my plans for the week, I wish I could but I want to see what happens day-to-day. . . . [S]he did that in the beginning of last year and never gave any kind of feedback and so I was just like, 'I'm not gonna send you those because if you give me feedback, I want to, but because I'm not gonna get it, I'm not gonna worry about it' . . . [S]he hasn't said anything to me, I haven't seen a single one . . . [T]hey yelled at one of our first year teachers today for not sending them [lesson plans] and he [first-year teacher] was like, 'oh I'll get you hard copies' and she [principal] was like, 'no I want it electronically,' but in the email it said hard copy or electronically is fine. They made a really big deal about it and here I was . . . in there at the same time and I'm like 'I haven't sent you a single one since you asked for them.' That teacher had sent in some already and so I was just like I'm the lucky one today and like I don't know if that comes—I think it's a combination, I don't know if it's because she assumes I'm a good teacher and that's what I'm doing or just because I earned my keep because I turned that stuff in last year and is she not going to pick on me for it this year. (Interview III, 12/14/12, 3202)

I interpret Phyllis's narrative as a second year teacher as indicative of her agency, illustrating her willingness to advocate for herself and her students. Her confidence and

familiarity with the science curriculum, district pacing guides, and benchmark assessments afforded an opportunity to challenge the existing practices that distinguished “good science teaching.” Phyllis’s sophisticated understanding of institutional structures enabled her to challenge the poor, yet misleading test results with school and district administrators, which contributed to her recognition of herself as a “good teacher.” Furthermore, Phyllis’s display of personal agency contesting the requirement that lesson plans be submitted was rooted in her interpretation of the superficiality of the required practice.

Summary: Phyllis’s evolution as a science teacher and its impact on her willingness to persist. According to Holland et al. (1998), “Agency happens daily and mundanely, and it deserves our attention” (p. 5). By describing her actions to “appease administration,” Phyllis authored herself as a humble sponge in order to stay out of the watchful eye of her administrators, avoid scrutiny, and gain an understanding of the institutional structures that defined “good teachers” in her placement. However, the oppressive institutional structures used to distinguish “good teachers” conflicted with the meanings Phyllis made of what a “good science teachers” could or should do. Acts of improvisation that drew on a familiarity with cultural resources, Phyllis found ways to challenge the value of test scores, compliance, and the shifting expectations to broaden the narrow meanings of “good teachers” found in her school.

Teachers electing to leave their placement due to job dissatisfaction cite administrative support and lack of teacher influence and autonomy as contributing to their dissatisfaction. Phyllis’s narrative provides texture to the construction of job

dissatisfaction in that authoring herself within as a “humble sponge” allowed her to be recognized by others as a “good teacher,” yet these same structures prevented her from recognizing herself as one. Phyllis’s narratives demonstrate a noticeable shift, or evolution, that results in a more sophisticated understanding of institutional structures and a reconstruction of how she recognizes herself as a “good teacher.” The meanings Phyllis made of her surroundings were that to avoid scrutiny, you have to “earn your keep” by appeasing her principal. Doing so early in her career eventually led to a sense of freedom and personal agency to challenge the institutional structures that used to recognize “good teachers”—A risky maneuver given the rigidity in which teachers were recognized as being “good.” However, as Phyllis read the conditions that guided her practice, identified instances where she could challenge, and gained more autonomy of her teaching practices, she developed greater affinity for her work as a science teacher contributing to her willingness to persist.

Storyline #3: Immediately Reading the Artificiality of Their Setting and Enacting Agency—The Narratives of Meegan and Lori

Lori and Meegan were both first-year teachers at the time of our interviews and entered their placement schools through TfA. However, unlike their TfA colleagues, Lori was a traditionally prepared teacher and Meegan had earned an advanced degree in business prior to teaching making her older than her TfA counterparts. Together, these reasons help explain why neither positioned themselves as “humble sponges” when they entered their placement. Both Meegan and Lori immediately discounted the practices and structures of test scores and compliance used to distinguish “good teachers” by vehemently discrediting any recognition according to these superficial practices. Rather,

each claimed value in forming student relationships, differentiating instruction to meet the needs of students and partnering with students along their journey through school.

Recall for example, Meegan's narrative describing discourses her colleagues used to position themselves as "captain of the ship" or "head of the house" (see Chapter V, p. 160) and how she felt ridiculed for choosing the word "partner" to describe how she saw herself as a teacher. Yet, she chose to defend her position early and often. Similarly, recall Lori's performances as an early career teacher being watched and judged by her colleagues as the "crazy science teacher" for having her students out of their seats and tracing their bodies on the floor. The meanings each made reflected the positions of authority that were available, yet each contested these positions from very early on.

Authoring against the cultural models of "good teacher": The enactment of Meegan's agency. Meegan read the artificiality of the structural aspects of her figured world by describing her involvement with leadership positions by stating, "they're obnoxious . . . We never do anything productive. We present all these great ideas and then they're like 'yeah, yeah, you do that.' No one follows through with anything" (Interview II, 1/16/13). Holding positions as Department Chair, member of the School Leadership and School Improvement Teams led Meegan to conclude her role on these committees served to do little more than maintain the status quo. Similarly, Meegan read her observations and evaluations to be superficial because they did little to improve her teaching:

My AP [assistant principal] did a formal observation. Her stuff was great. It was almost too positive to where I was like 'dude, I'm new, I know that I'm not good.' She was like rating me so high on a lot of stuff. [Actually], I almost liked when

they knocked me down a little bit . . . [M]y mentor is a joke. She acts like I'm the Einstein of teaching. When I get done with them [mentor and administrators] I'm like, 'you did not help me grow in any way, shape, or form.' I want some feedback because I know I'm not perfect . . . Come on! (Interview III, 2/6/13)

Reading the artificiality of the committees she served on, combined with the feedback she received from significant others in her school, Meegan rejected the notion that she was an accomplished teacher and deemed the judgments of others to be meaningless by stating, "I do not have the training or education that I should in order to be like the *crème` de la crème`*" (3275). Meegan's frustration with her inability to initiate change as a school leader paired with her lackluster opinion of her teaching became foundational elements that contributed to her authoring an identity that challenged institutional norms that distinguished "good teaching" and "good teachers."

Meegan's desire to "partner" with her students was strong. In fact, she discounted the feedback she received from administrators and district officials because, in her opinion, they lacked an understanding of her students. However, she did value the opinions of her immediate colleagues.

So all of my observations always go well. I never get negative feedback but I don't care about them because I don't value any of those people . . . They don't know my kids. They don't know anything . . . I just don't value it. My fellow teachers however, I do value what they say because they know these kids and they know for one kid what may be like not a big deal, is a huge deal for another kid and so I'll have teachers say to me like 'Pete won't do anything in anyone's class and he was like great in your class' [or] 'I've noticed a difference in Namyia [student] since she worked with you' and that kind of stuff is like super nice for sure, but definitely my validation and my entire job comes from the kids . . . I'm confident enough in myself now as I'm getting older to know when I'm doing a good job and when . . . I allow myself to reflect on and be proud of myself because I can tell by their test scores or just by their attitudes—*like screw the numbers* [emphasis in original] . . . I can tell by the looks in the faces and their

personalities and just I can tell that they're like getting it and do it and that validates it for sure. (Interview II, 1/16/13)

I found it to be interesting the way test scores crept unintentionally into Meegan's narrative. I interpret this as evidence that speaks to the significance of discourses that center around test scores. However, Meegan quickly discredits the influence of test scores to distinguish her as a "good teacher" by stating, "screw the numbers" which for me represented authoring that resisted the strong influences of testing.

Less surprising was the source of validation that she gleaned from her students' enthusiasm for school and relationships they developed with Meegan. I interpret this to mean that Meegan's intent to partner with students was more than talk representing ways she validated her position as a teacher. Additionally, her narrative represented that validation of her practice came from her students, which was a significant departure from the stories told by participants teaching tested grade levels and subject areas.

Meegan's relationships and effectiveness did not go unnoticed by others in her school. For example, Meegan described, "I mean, even the lunch ladies have told me they think [I'm] a great teacher. And I'm like, that's weird because they've never been in here [in her classroom]. I could be a really shit teacher" (1033). Meegan dismissed the lunch ladies' assessment of her teaching because they had not seen what she actually did with her students. This narrative speaks to the superficiality of how teachers were recognized as being "good."

Conversely, feedback Meegan received from colleagues regarding her practices as a passionate, caring and committed educator resonated with her most. For example, she recalled an exchange with a senior member of the faculty by stating,

It's been nice because when we get out of staff meetings or leadership team meetings I do have teachers pull me aside and say, 'I hear really great things,' 'or the kids really enjoy you' . . . 'we appreciate your passion,' 'thank you for speaking up,' like that kind of stuff. (Interview I, 12/5/12)

Meegan's narratives are significant because, although she was recognized as a "good teacher" by her mentor, administrators, colleagues, and school support staff; she selectively tempered these positioning forces because she read many of them to be superficial. For instance, Meegan recognized and accepted the position as a student advocate offered by her peers who appreciated Meegan's willingness to "speak up" or being "passion[ate]." Conversely, she discredited the positioning discourses of others who chose to recognize compliance, order and test scores as indicators of teacher's performance. In fact, Meegan positioned herself as an inexperienced teacher in need of constructive feedback and instructional support in order to "fight the apathy" (732) she found to be so widely circulated and be personally upsetting in her placement. For example, Meegan spoke of the apathy she perceived among her administrators, her colleagues, and her students, yet also reflected on the origin of the apathy of others:

So that has helped me because at first I thought, wow, I got to get used to these teachers all not caring and what the heck's going on. Really what it is, is you can only get told 'no' so many times before you shut down. And every time a teacher stands up for anything that they believe in in those meetings [e.g., staff meetings, leadership meetings], they get shut down. (Interview I, 12/5/12)

Meegan continued by acknowledging how apathy was produced in her school.

Interestingly, her narrative also reveals her alternative constructions of what “good teaching” could be. For example, she stated:

With the teachers . . . I definitely wanted to flip desks and throw chairs with my anger and resentment towards some of them [teachers] because I just thought they didn’t care [about] what was going on . . . I think it’s because no one talks about it. What does a good classroom look like? It can look like many, many different things. But just because you walk into a classroom and you see that every child is silently, ‘diligently’ working through the whole period, working does not translate to learning. It does not always. Just because you’re going and you’re working on a worksheet, you could do an entire worksheet and not learn a single thing.
(Interview I, 12/5/12, 836)

Meegan followed this narrative with a comment that portrayed empathy for the circumstances she found her students living by stating, “when in my life have I ever successfully sat down for an hour and 45 minutes and not said a word, not moved and not done any engaging or talking through things and actually retained knowledge or learned?” (Interview I, 12/5/12).

The influences of the practices that distinguished “good” is evident in Meegan’s narrative, however, even early on in her narrative it was apparent that Meegan intended to challenge the narrow meanings of “good teacher” by broadening what counted as “good.” Having never embraced these circulated ideals, she did not present herself as a humble sponge. Rather, she entered her placement critical of the narrow meanings of “good teacher” by electing to “partner” with her students and pursued this goal with great resolve.

My research was conducted when Meegan was beginning her second semester as an early career teacher. Her narratives provided no indication that she performed herself as a humble sponge, rather she enacted agency to challenge the institutional structures that she found to be dissatisfying. For instance she spoke of a group of teachers that she assembled with to “change the culture” in her school. Relying on the positive feedback she had received from her students and significant others, Meegan set out to magnify her successes to promote change:

So right now you know I’m all about trying to change the culture of this school and I’m trying to do this ‘turn-around team’ with some of the other teachers, and mentioning it to my students and hearing some of them say like, ‘you’re not gonna change anything.’ ‘Nothing’s gonna happen.’ And I’m like, ‘how many times this semester have we talked about the power to change this school lies within each one of us and in this classroom. And if we can change this classroom, we can change the department. If we can change the department, we can change the school,’ all that. And just no matter how many times I’ve said it, there’s [sic] still kids who just—they’re so apathetic. And then that’s like an emotional, behavioral, cultural thing that they’re apathetic about. (Interview I, 12/5/12, 298)

The meanings Meegan had made of being celebrated for superficial and inconsequential reasons presented opportunities to experiment with her classroom in even more splendid ways. For instance, Meegan decided to regularly forgo the Chemistry curriculum every Thursday and replace it with “Thankful Thursdays,” which Meegan authored as a practice where students can discuss things in their lives for which they are thankful. Recipients of thanks ranged from teachers, families, friends, members of the community and were often accompanied by ‘Thank You’ notes being written and delivered by the students. Meegan described what she had learned during these

experiences about what's valued in her school, which impacts her ongoing work as a teacher:

Compliance through and through and I can say that without a shadow of a doubt because I focused so much on talking about these things in my class during Thankful Thursdays. . . . [R]esoundingly, like worst kid in my class all the way to the highest top performing kid in my class, say [administration] cares way more about my backpack, they care more about my shoes, they care more about these than they care about my learning. That's from the kids! And as a teacher, they [administration] care so much more about me doing all these stupid little things than they care about what's actually happening and how I'm doing and how are my kids learning. (Interview II, 1/16/13)

From the beginning, Meegan had intended to perform herself as a partner with her students. Unabashedly, she was able to reject the positions her colleagues had made available to her by resisting the pressures to take up more authoritative positions. Equally important were the ways she shelved the curriculum and assessments associated with her content to develop authentic relationships with her students. In another example of the ways Meegan breaks with tradition and rejects test scores and compliance as measures of success, Meegan she explained how she remains in touch with her students' orientations towards schools through frequent surveys of her students where she asks them report on their feelings about her class, their perceptions of her as a teacher, and whether they feel included in her class.

I try to give surveys every couple of weeks about like how am I doing? How is the class? I also ask them [about] the school culture. How do you feel in your other classes? So many of them say, 'it just feels nice to have a teacher ask me how my weekend was.' Like what a little baby question. The thing that makes it worth it are the kids who genuinely care and like getting to have breakthroughs . . . It's [has] nothing at all to do with my administration or [test] results. It's all

student driven, something that's new apparently to [our high school]. (Interview II, 1/16/13, 2967)

Gaining an appreciation of how such simple personal comments could impact her students' outlook towards their teacher reinforced her relational position as a partner with her students. The importance of relationships for Meegan contributed to her recognition of herself as a "good teacher" and had little to do with administrators, district officials, or outsiders. Rather, her validation came from colleagues whom she respected and her students. Returning from semester break and being assigned to a new group of students, Meegan reflected on the importance of relationships in her constructed identity as an "effective teacher" shedding light on her day-to-day persistence and the ways relationships with students figured into her willingness to persist:

Meegan: Yeah, . . . the first few days, I was like really struggling and I was not liking my job which was like hard because I *was* loving it so much, . . . it's stupid to say this because I know this but it's . . . all because of my kids . . . [S]o when I got this whole brand new group that doesn't know me that well and I don't know them that well, all of a sudden . . . I didn't wanna do it and I realized I haven't formed the relationships yet.

Patrick: So the students are the source of your rewards?

Meegan: Oh, yeah, without a doubt. The kids. The little angel babies that I love.

Patrick: What about them?

Meegan: They just love us and you can tell that they care and they, it's so hard for me to accept this as a reality but they literally cherish and appreciate you asking how their day is more than anything in the world but it breaks my heart that me saying hey, 'how is your weekend' means as much as it does . . . [I]t literally breaks my heart that like they've gone through a system and they go home to people and they're in a school with all these people who don't say anything to them about it. (Interview II, 1/16/13)

Despite the narrow meanings of “good teacher” promoted by the schools’ practices and institutional policies, teachers in this study who were able to broaden those meanings appeared more satisfied in their work because the newly constructed meanings included the reasons they decided to pursue careers in teaching. For instance, contesting test scores, rigidly taught curriculum, student compliance as artificial measures of teacher’s success, Meegan intended to partner with her students and challenge institutional norms long before she ever chose that card at the opening staff meeting.

Summary: Authoring against cultural models of “good teacher” and its impact on Meegan’s willingness to persist. Like other participants, Meegan pursued teaching to promote social justice, which meant being aware of and willing to challenge the inequities faced by students according to race, income and geography. Her way to challenge the inequities meant casting aside test scores and compliance as indicators of “good teaching” and replacing them with alternative practices such as Thankful Thursdays, student surveys, and empowering students to contribute to change. These practices not only transformed the culture of her classroom, they also directly opposed the widely circulated practices and structures contributing to meanings of “good teaching.” In other words, in a world where silent and compliant students were lauded, Meegan authored a position where she welcomed student input and privileged their voice.

Authoring against the cultural models of “good teacher”: The enactment of Lori’s agency. The meanings that Lori made of “good teaching” in her school were similar to that of all of the subjects in that student compliance was valued and used to

subject teachers to scrutiny. For instance, Lori spoke of an observation she had recently received,

[T]he only thing that I get a lot of feedback on from the school is behavior stuff. It's never what I'm actually teaching them . . . It doesn't actually matter what you taught them that day because it seems like it's more important for me to be perceived as a good teacher, that's how it's supposed to be. (Interview II, 12/14/12)

It is worth a reminder that fifth-grade science is subject to yearly accountability, whereby student's scores were used as a measure of the overall productivity of the school. However, prior to receiving year-end test results, Lori was positioned as a "good teacher" based on student compliance. Recall Lori's statement of how good teachers were recognized, "everyone [is] sitting in rows silently writing out of a book" (2007). And following a few of the superficial observations of her classroom, Lori concluded that good teachers were recognized maintaining orderly and quiet classrooms that keep students busy.

Like Meegan, Lori elected to reject the offerings that she was a "good teacher" for superficial reasons such as maintaining seated students who remained quiet and looked busy. Instead, she authored herself against the institutional practices and meanings used to distinguish "good teachers." For example, I asked Lori, "What does being a good teacher look like from your perspective?"

What do I think is a good teacher? Someone who makes it interesting or makes it apply to their [students'] lives. I know I don't remember anything from those classes where I sat and took boring notes where I filled in the blanks and drooled over it. I try to give them [something more engaging]—yesterday I just printed out a giant blank diagram of the respiratory system on a piece of paper and that

worked very well because then I told them if you start getting bored, just start making the person look like you. If you are getting ahead of us, just start making the person—so by the end there was like dreadlocks and ridiculous looking people, but they had it all labeled: trachea, bronchia. Together they are the bronchi like parents, mom and dad together, because they were like, ‘why is it a weird name? Why is it a different name?’ So we had to explain it’s plural. (Interview II, 12/14/12)

Lori, a traditionally prepared educator, rejected the ways compliance represented artifacts of “good teaching.” Rather, Lori’s narrative illustrates the ways she authored an alternative identity of “good teacher” by privileging and celebrating student engagement, movement, and discourse promoted by joy, enthusiasm, creativity, and inquiry. I can only infer that the relative ease in which she rejected these offerings was related to her teacher preparation.

Lori offered other examples of how she contested widely circulated meanings of “good teaching” by authoring an identity that allowed her to differentiate instruction to meet the needs of a few students, by privileging movement and unsolicited discourse.

For example, I have some students who are diagnosed with ADHD and I allow them to stand at their seats when completing their work. If I demand that they remain seated, they will run around the room. Another student constantly finishes my sentences for me and I allow her to do this because she has a hard time staying quiet. At least if she is finishing my sentences, she is paying attention. But these behaviors are not normal in the school, so again, I feel judged by my administrators and peers . . . So then people come in and they’re like, ‘why are you doing that?’ (Interview I, 12/6/12, 884)

Despite the scrutiny associated with noisy students who drift from their seats, Lori read these institutional practices as superficial to student learning and authored teaching practices to challenge them.

Additionally, Lori authored an identity as an advocate for her students by disrupting the ways students and teachers in her school were positioned. For example, Lori described the meanings she and her students constructed of how administrators in her school positioned them by stating:

Well, it's . . . more like [a] mindset like how they want us to think and how they want the kids to think which I think is powerful in a lot of ways because most of *the kids feel like they're stuck, like they're stuck, and this is the way that they are and there's nothing they can do about it* [emphasis in original]. Like this is them and take it or leave it like they don't see them being able to change so whenever you can explicitly teach them that they can grow and they're not stuck in this place, they don't have to stay here but it's their choice, when they have a choice in it then usually it's pretty powerful but then also like when you talk to kids that way you're kind of opening yourself up to them a lot more than you would if you were just teaching them content every day. (Interview II, 12/14/12)

Drawing upon her understanding of the structures used to distinguish “good teachers,” her own preparation as a teacher, and the meanings she made of how teachers and students were positioned, Lori elected to author herself against institutional practices and associated meanings to position herself as a student advocate. As an advocate, Lori demonstrated how students have control over their futures, choices in their learning, and hope for opportunities of mobility if they desired. It is also interesting to note that “opening yourself up” to form relationships with students opposed “teaching them content every day” and became a resource to recognize herself as a “good teacher.”

Authoring against reading intervention: Evidence of Lori's agency. Lori authored herself against institutional practices and meanings by challenging a programmatic reading intervention available in her school. For instance, a requirement of teachers working in Lori's school was they implement the Accelerated Reader (AR) program,

which required students to select books on their reading level, read those books, and take tests to measure their comprehension. The meanings Lori constructed of this requirement were influenced by her history as a student in a Title I school. For instance, she recalled:

Lori: I went to a Title I school and when they would reward us for stuff, it never worked, so why are we? We got pizza if we read 100 AR books and I cheated on every AR test. I told my kids that. I was like, 'I cheated on AR tests' and they were all like, what? And I was like, 'yep.' I did not read it. I was like, 'so if you don't read an AR book in my class, I will not be mad at you.' And they were like, okay, and they were all like reading comic books and I was like, 'I don't care.' You're reading. You can tell me all about that book. AR hasn't been updated since I was in school so who cares?

Patrick: So that's an example of a challenge because AR is something that's mandated in your school—

Lori: Yes, and it's stupid.

Patrick: And you're challenging that mandate.

Lori: Yes because it does not work. It does—it encourages the kids to read that are already going to read. It doesn't encourage the kids to read that aren't going to read.

Patrick: What repercussions might you suffer for challenging that?

Lori: My homeroom will have no AR points and they'll look bad, but oh well.

Patrick: Okay, but will it reflect on you?

Lori: Probably.

Patrick: And you're okay with that?

Lori: Yep. I'm okay with it because the librarian is not going to do anything about it.

Patrick: So she's in charge of monitoring that?

Lori: Yep. We don't have a very good relationship so we just stay out of each other's way. So she's not going to come talk to me about it.

Patrick: And you don't have any fear that the principal will?

Lori: No. Enough of them take AR tests. I just have them—they're like, can I take an AR test? And I'm like, yep. You can check if it's on there because I don't have any AR books. Well, now I will, but we didn't before and then it was very frustrating. (Interview II, 12/14/12)

Despite the pressures circulating in her school to support the AR program, the meanings Lori made of the AR program were hollow, meaningless, and inconsequential to promote her students' reading comprehension. In addition she found the titles to be out of date, which failed to capture her students' attention. Simply defying the mandate that AR be implemented is one example of Lori's agency. However, Lori's advocacy for her students resulted in her soliciting donations from friends, family, and community members to purchase contemporary and relevant titles to supplement the reading resources found within her school. For example, she described:

Lori: I don't think I told you this last time, but I randomly decided one night . . . I want to give all the kids a book for Christmas. So I went on Amazon and made a wish list and I put a bunch of—I put a graphic novel for third grade because some of them—*The Giver*, *My Little Blue Dolphins*, what else? A Neil Gaiman book because they all like him because I have *Coraline* in my class so they all want my book and then two other books. I can't remember right now, but they're all different reading levels. So I put them all on a wish list and then shared it—sent mass emails out and shared it and now about 70 books got purchased in 24 hours.

Patrick: You're kidding me.

Lori: I'm serious. It was ridiculous and I even made a wish list for a classroom library of sets, like *The Hunger Games*, books they actually want to read. Sorry. *Babysitter's Club*? Not doing it. Not doing

anything. They cannot read *Captain Underpants* in fifth grade. They have got to move on. No more *Diary of a Wimpy Kid*. That's a third grade reading level. We've got to move on. So yeah, so I made another wish list of just other books like girly books and *Redwall*. It's like book they don't even know about. I was like how do you not know about *Redwall*? They had no idea what that is. I was like, your mind is about to get blown, all the little nerdy boys. You're about to blow up. You don't even know. *Redwall's* one of the books, the first *Redwall* book. So I shared it and then they all got bought and then a bunch of books on my wish list have got bought too, my other wish list and then a bunch of parents bought a bunch of the books on the wish list.

Patrick: Your students' parents?

Lori: Yes. Yeah and then—

Patrick: How surprising was that?

Lori: I was really surprised and actually I felt bad about it later. I actually didn't even mean to send two of them the email. It was an email I sent to my family and I accidentally sent it to them in the list and then they were like, this is great! And then I was like, wow, I should—So then I sent it out from my school email to all the parents.

Patrick: Yes. Now what made you think of doing this?

Lori: Because a lot of them had never owned a book.

Patrick: What made you think of taking on this responsibility yourself?

Lori: I just wanted to give them a book. One of my friends who teaches [in a neighboring county], she did it. She teaches first grade and she bought—she did it with—what's that book? *Polar Express* and she only had 20 copies because she only had one class. So I was like, this is totally not going to happen. In my head, I was like but we'll just try. We'll just see if it happens and then it was like all purchased. Literally I put it out on Saturday night and on Monday they were all purchased, seventy books plus. Probably like 85 actually.

Patrick: Have they come in yet?

Lori: Some of them.

Patrick: Nice. So it's a real—

Lori: Yeah, it's for real. They're all on my table. There's a lot of cardboard in my house. I wrote my postman a note. I was like I'm really sorry in advance. There's going to be a lot of boxes coming here until January.

Patrick: They're used to it. It's Christmas time.

Lori: Yeah, all at this one house because they deliver on foot. So I was like you're going to have to go get the van. (Interview II, 12/14/12)

The meanings Lori made of the superficiality of the AR program combined with the notion that her classroom was improperly equipped to engage her students in reading, contributed to acts of agency and advocacy. Consequently, Lori managed to secure more contemporary and engaging titles for her students to read; and in doing so, positioned herself as an adult who cares deeply about her students and reinforced her affiliation with the position of giving back that inspired her to teach in a Title I school.

Product of agency: Lori's authored position as caring teacher. Equity-minded teachers, acting as change agents, perform best in settings that enable them to consistently form caring relationships (Noddings, 2001). However, it was common to hear teachers in Lori's school disregarding this simple notion. For instance, Lori recalled, "Probably the most difficult thing to get use to was how people talked to children—the yelling—that was very surprising to me at the beginning" (571). Lori continued by concluding:

Lori: [I]t's like you're not supposed to be happy at school. I don't understand. We're at school. It's supposed to be fun. It's supposed to be interesting and fun.

Patrick: Can you think of specific things that are going on in the school that are making the kids unhappy?

Lori: I think they feel like it's like a jail some of them. They feel like they're trapped . . . until 3:00 pm and then they're released into the world and they don't associate school as being a good place to be. That's just not how they associate, but then I definitely noticed a big difference between when teachers go to things they're involved in. Like if going—they were in a Christmas play and all the fifth grade teachers, we all went and so it was a huge deal to them [students] and they were like, 'you're embarrassing us—you need to sit down.' It was funny, but when they know you're interested in what they're doing, then it relates what they do outside school, inside of school they're better, which I didn't think it was that foreign of a concept, but evidently it is.

Patrick: Why do you say that?

Lori: Because it seems like—I know a lot of administrative people and other people don't go to a lot of things that they're in and don't do things, aren't excited about it and the principals and people who do are a million times . . . more effective? Why wouldn't you just go a couple of times? . . . Just go make an appearance and then you can just sneak out later. I don't know. It's just weird to me because a lot of them have such a negative aspect . . . It's like they [administration] want some kind of Bandaid, a quick fix, move on. That's not going to happen.

It's going to take a while and we suspend kids every five seconds and there's no protocol for the whole building that everyone is aware of. They don't know where they stand. They don't know what's going to happen. If they—a lot of them are being taught in classrooms to question, too—they're being taught to do these things and then if they do that, they're going to get suspended. They're just supposed to shut up all the time. Maybe not question authority, but question why they're there.

Patrick: That's so profound that I never thought about that.

Lori: What are we telling them? I don't know because then they're like, don't talk to back and a lot of times, they're not even talking back . . . They don't know why they're in trouble. They don't know what they did to be in trouble because some of the—one of the boys, he is ridiculously loud. He is the loudest person I've ever heard in my life and he doesn't know he's loud. He has no idea—no clue. So we remind him, Shane, I could hear you from the other side of the building, for real. Every sentence, the whole conversation, I heard all of it so I hope it wasn't anything you didn't want me to know because I heard it,

but then if somebody else might have heard him, they might have said, that's a consequence or . . . we just give them silent lunch because that's all the control we have. I rarely do that unless I'm having a really big problem. (Interview II, 12/14/12)

Lori's narrative revealed her sincere interest in her students' experiences, inside and outside of the classroom. For instance, reaching out to students to form relationships in class, attending student activities outside of class, and constructing meanings of the experiences her students faced in school, were representative of her agency to enact a different kind of teacher role than one promoted at her school. Lori interpreted her students' experience through the statement, "you're not supposed to be happy at school" and constructed these meanings from the values placed on silence, order, and compliance. However, rather than allowing her students to remain recipients, or victims of institutional conditions, Lori advocated for her students in ways that allowed them to avoid the work required by the AR program, allowing students to stand at their desks, move within the classroom, and even engage in discussion during instruction. Consequently, Lori's conscious decisions to challenge celebrated practices in her school placed her at risk of scrutiny, but her vision of what teaching could be outweighed any negative repercussions that may have come from her administrators.

Lori's agency was also evident in her description of the relationships she sought to promote, which occasionally occurred at the expense of teaching students content. For instance, she surmised, "Also, lack of relationships . . . if you don't build a relationship with them from the beginning, they're not going to do your work" (626). She then

continued by describing the impact of the transient nature of teachers in her school system impacted her student's perceptions of their teachers, by stating:

I noticed a really big change in the students that I worked really hard to get to know at the beginning of the year. I make them understand that I'm not going to stay here for part of the year and then leave because I don't like it; they're all very worried about that . . . All the kids are very concerned. If they do something to make me very upset, they will come in the next day, apologize and write me a letter—the whole nine yards. They tell me how they're afraid I'm going to leave because I was mad about something small. It could've been something very tiny, but then they'll make it into this huge apology. Some of them just come in the next day and are better, and we don't worry about it again. (Interview I, 12/6/12)

Lori's narrative illustrates the ways she rejected test scores and compliance as indicators of "good teaching" and replaced them with forming student relationships and advocating for her students. Richard Kitchen (2005) urges prospective teachers to confront the injustices faced by students. One approach to accomplish this goal is to make equity and multiculturalism explicit in his preparation of new teachers to work in high poverty, diverse schools by assisting prospective teachers to view their students as members of distinct communities while simultaneously trying to understand their individuality. Lori's stories of her views of her students, her actions to differentiate her instructional practice to meet individual student needs, and her advocacy position embody the goals set forth by Kitchen (2005) and show promise for the future of teacher educators.

Summary: Authoring against cultural models of "good teacher" and its impact on Lori's willingness to persist. As I stated earlier, Lori was the only early career teacher in this study who had completed a formal teacher preparation program.

Nevertheless, the stories she told of her experience were not unique. Lori, like Meegan, did not tell stories that would characterize her as a humble sponge. Rather, she positioned herself as somewhat of a novelty reading the system with a sophistication that enabled her to construct meanings of “good teacher” that were distinct from the meanings that were prominent in her school. However, distinction also subjected her to additional surveillance and scrutiny from her colleagues and administrators who often questioned her teaching practices. Despite the increased attention attributed to her agentic teaching practices, it was evident that her ability to cast these judgments aside and continue practicing herself in ways that were aligned to her personal vision of teaching contributed to her willingness to persist.

Additionally, Lori was positioned by her colleagues as being a “good teacher” for successfully managing students’ group work when tracing their bodies on the floor, and chastised for her inability to manage her student’s behavior in the hallways. However, she resisted these positioning forces because to her, they represented her management of student compliance and failed to consider what learning had taken place. Although the figured world of teaching science in low-performing, rural schools lauded student compliance, Lori rejected such positioning forces and sought to pursue authentic learning amongst her students.

Further, Lori resisted many of the circulated practices that were prominent in the figured world of low-performing, rural schools. For example, participation in the Accelerated Reading program was interpreted as artificial, thus she enacted agency to resist these practices and elected instead to have her students engage in more meaningful

and relevant reading activities. Additionally, the meanings she made of the structures her students had come to operate within were oppressive and offered them little hope for mobility and change. Consequently, she authored herself as an advocate for students by placing value in their propensity to question authority and engage in decisions pertaining to their education.

I argue that Lori's traditional teacher preparation combined with her experiences attending Title I schools contributed not only to her agency but also to her willingness to persist. Her agency resulted in the construction of alternative meanings (student experiences, and teacher working conditions) and contributed to her authoring novel teaching practices to differentiate her instruction and meet the needs of her students. Such teaching practices contributed to a stronger affinity between herself and her students, which positioned her as a student advocate and made her persistence more likely.

Storyline #4: Constructing a Youth Depravity Model and Role in Kyla and Carol's Willingness to Persist

"I think it's the kids. I think it's a discipline issue across the board" (Carol, 2116). Kyla and Carol, the most senior participants in this study, provided narratives that were distinct from others described above. Since both taught seventh-grade science, which was an untested grade level, the celebrated subject positions available to them were based on compliance. For instance, Carol noted, "I feel like subject-wise there's no pressure" (2285).

At the suggestion of both participants, Carol and Kyla were interviewed together. Carol, who was more outspoken, set the tone of the interview giving the three of us some

indication as to where their stories would take us. Carol shared the importance she had placed on student discipline by describing what she found most significant in comparing students in her current placement with those from other schools by stating:

To me kids are kids, no matter where they are. But again I think the biggest difference is the discipline issue. So I'm okay with that, I'm okay with the discipline, but I expect respect. I demand respect. I expect learning to take place in the classroom under controlled situations so that's what I'm looking for. I think that if my rules are here you know my rules, you know me. We have to understand that I'm here to teach and you're here to learn. I'm the boss of the classroom, you're here to learn, participate, contribute—I'm okay with that. I just think that the discipline is where we have the biggest problem. I will also say this. I think this has been the toughest year. (Interview I, 1/31/13)

Carol's description represents her vision of teacher as authority figure. Achieving this vision allowed her to recognize herself and be recognized as a "good teacher."

Kyla's vision was shaped by her past experiences as a student and had authored a position similar to that of Carol's, stating, "I grew up in a very traditional community so the teacher is simply the master in the classroom, the teacher tells you what to do and the teacher sets an expectation" (Interview I, 1/31/13). She added that in her current placement, "we have a lot of concerns about discipline" (1389). Consequently, "dealing with discipline" (1541) emerged from Kyla's narrative as significant in her recognition of herself as a "good teacher." In fact, discipline figured so prominently in Kyla's narratives it overshadowed other indicators of "good teaching" such as student engagement. In fact, Kyla's statement: "[I]t is the discipline because you give them homework and you do not get it back" (Kyla, 389) implied that discipline and student engagement overlapped so well, they were perceived as being interchangeable.

Student discipline figured prominently as a marker of in Carol's definition of "good teacher." In fact, she mentioned it more than 40 times during our recorded interview in response to questions such as:

Patrick: Now after arriving here were there any things that you had to get used to?

Carol: Just the discipline issues.

Patrick: How so? Can you explain?

Carol: I think that they were good students but they were more disruptive in class and I found that to be a major problem.

Patrick: Is that all you had to get used to? The students' behavior?

Carol: Yeah, that's it. (Interview I, 1/31/13)

In response to "disruptive" students, Kyla and Carol authored themselves within an institutional structure of compliance in order to fit into the cultural model of "good teacher." For instance, rather than altering their instructional practices to include students in meaningful discourse and application of content knowledge, Kyla and Carol constructed meanings of "good science teaching" that included managing and training students to acclimate them to the institutional expectations within their school. Carol proudly described:

Carol: As a seventh-grade [teacher], we're the most hated.

Patrick: Okay, tell my why.

Carol: We've always been the most hated.

Patrick: Who hates you?

Carol: Parents, students.

Patrick: Why?

Carol: Because they think that we're the toughest. They think we are the toughest.

Patrick: Is it something about seventh grade or is it something about your personality?

Carol: Well, if you been at the middle school level, when they come into sixth, they baby them, when they come into seventh, we get down to business.

Patrick: I see.

Carol: When they [go to the] eighth [grade] we've already groomed them because eighth-grade teachers will tell us all the time, 'Hey guys, you did a good job with that bunch. We saw them when they first got here, you got them in line.' They [eighth-grade teachers] love us. They [students] . . . really killed us. But they are together. That's something I'm worried about. They're not gonna say that about this bunch. We haven't been able to tame this bunch. (Interview II, 2/5/13)

Carol continued during the same interview,

Because they said that the seventh-grade teachers were so tough . . . Since we've been here, the parents talk about us and some of our teammates. [Parent say], 'You're a team of four ladies and you ladies are meaner than the team with the two guys.' They talk about us even now, but that doesn't bother me . . . They do think the seventh grade is tough on them. They really do. And you will hear people, even in the community will say, 'If I ever get them out of that seventh grade they'll be okay.' They'll tell you that. I tell them that too sometimes. (Interview II, 2/5/13)

Carol authored herself as a science teacher who was "tough on kids" in order to "tame" them and maintain classroom control. Notably, these performances were celebrated practices contributing to the meanings of "good teachers" in low-performing,

rural schools and became aspirations of Carol to be recognized and recognize herself as a “good teacher.”

Similarly, Kyla’s recognition of herself as a “good teacher” came from her ability to “train” students to be prepared to enter the eighth grade, which often had little to do with science content. Instead, Kyla’s sense of accomplishment meant helping them to comply with the school dress code. For instance, she described:

Kyla: I don’t want them to be in trouble because of dress code. So usually—

Patrick: Dress code mandates that they have a belt?

Ms. Carol: Right.

Ms. Kyla: Yes. Usually that is our problem. That was our biggest concern from the beginning in my room.

Patrick: Is that students weren’t wearing belts?

Ms. Kyla: Yes. Not wearing belts . . . So I did, I collected a lot of belts and bought belts from yard sales . . . wherever sale I can get . . . All my students know that I have some belts, so they would come to me and borrow my belts. One of the students came here this morning and bring the belts. From the end of the hallway he’s swaying the belt. And I say ‘okay.’ ‘Here’s your belt, Ms. Kyla,’ you know. I just felt, why? Where is the respect? Why don’t you try to be nice? I saved you yesterday from this, but hey, why not say, ‘thank you’? So I have to correct that, you know. And I say, well, ‘where’s my magic word?’ First—first thing in the morning, you know. ‘Here’s your belt, Ms. Kyla,’ you know the belt nearly slapped my face. I’m like, oh, my God. And I said ‘oh, where’s my magic word,’ you know? ‘What magic word are you talking about?’ ‘Here’s your belt.’
(Interview II, 2/5/13)

Kyla's narrative exemplifies the value she placed on helping students achieve certain codes of conduct, while also illustrating her agency in constructing meanings of "good teaching" that helped students conform to certain expectations of dress.

Both participants constructed meanings of "good teaching" that centralized compliance, be it in their dress or their ability to conform to the expectations of teachers in the eighth grade. Regardless of their intent, each celebrated compliance among their students and used it as an instrument to measure their success as teachers.

Defining what counts as learning: Kyla and Carol's vision of "good teaching." Examining their narratives from an instructional perspective, "good teaching" for Kyla and Carol came via reinforcing science vocabulary. Students in Kyla' and Carol's class were recognized and celebrated for mastering the language of science which they demonstrated by recalling factual knowledge and completing rote memory tasks. As might be expected, the students resisted these instructional techniques leaving both Kyla and Carol feeling unaccomplished for not maintaining student compliance. For example, Carol described:

I [had] given them three days to do ten vocabulary [terms] . . . you know we're gonna start with *vocabulary* [emphasis added] . . . we had to set the tone, we had to train them to do the types of things we wanted to do. It was obvious that they weren't used to that . . . We're giving them everything, we've tried every strategy possible so far and I can say right now . . . they're not retaining it. And that does bother me. Case in point, we're working on Protists. I thought we gave a fantastic introduction, gave everything we needed to set the groundwork. We wanted to *put more emphasis on the vocabulary because if we had the vocabulary then they had the major concept* [emphasis added] . . . we decided to do a little card type thing where they had the wordlist on the board or whatever and they . . . came up with their own definitions and their own words. That was difficult for them, which I did not understand, even using the paper. So we decided, 'Okay, let's try another strategy.' (Carol, Interview I, 1/31/13)

Carol described another experience when students struggled with recalling science facts:

And so I asked one question. And I didn't have 50 percent of my kids that could answer the question. And I was totally disappointed because one, the homework last night lent itself to the question today, so had they done the homework, even after they did all these wonderful things the day before, they should have been more successful. (Carol, Interview I, 1/31/13)

Along similar lines, Kyla's narrative exemplified the importance of recalling factual knowledge to their success as science students by stating:

Their [students'] retention is really very poor . . . We talk to them about retention of the topics of the lesson. Now they know it. In the classroom they know it very well . . . But then after a month, give it back to them, they seem to have forgotten most of it. (Kyla, Interview I, 1/31/13)

When students were unable to recall factual knowledge or science vocabulary they were deemed by Kyla and Carol as inattentive, unmotivated and immature. Their narratives indicate that the construction of a youth depravity model, whereby students are to blame for the school's poor performance and teacher's instructional shortcomings, served to preserve their ability to recognize themselves as "good teachers" and their personal visions of teaching. In the following section I describe how Kyla and Carol's narratives contribute to their willingness to persist as science teachers in low-performing, rural schools.

The significance of a youth depravity model to Kyla and Carol's willingness to persist.

I'm ready to teach, I just got to have somebody that's there to listen—somebody who wants to learn. And I know that I've got to try every strategy possible to get

that lesson over to them . . . I've got to have kids there that want to work with me. (Carol, Interview I, 1/31/13)

Carol and Kyla's narratives depicted a youth depravity model—*it's not my fault, it's the kids' fault* to protect their personal vision of being “good teachers.” However, recent developments and erosion of student's ability caused each to question whether their persistence was likely. For instance, Carol admitted, “[T]he kind of work that you do and the work status that you have affects your personal life. But you do get discouraged. I could tell you I'm more discouraged now than I have been” (Interview II, 2/5/13). Further, she claimed, “I plan to hang in here a couple more years” (1262) because, “I'm not gonna commit myself to something that I know I can't do and do well” (1315). Carol's final statement is significant because it represents the kind of day-to-day tensions that contribute to one's willingness to persist.

Similarly, Kyla provided evidence in her narrative of the construction of a youth depravity model. For example she stated, “there is a lot of immaturity” (2230), “I just wish that the students are more interested” (190), “a lot of times they [students] don't care” (405). Additionally, she described her responses to her perceptions of student's deficiencies, stating:

Sometimes when you try to make it easier for them . . . you get resistance like ‘I don't need that.’ It is basically the ones that you need to differentiate or those who have certain accommodations are the lazy ones. It is not dealing with learning disability, but dealing with attitude. (Interview I, 1/31/13)

Carol responded to Kyla's assessment by adding, "this is a different breed of kids. This is really a different breed . . . I think there were too many students passed on" (Interview I, 1/31/13).

Defeated, each teacher discussed the impact of their experience on their willingness to persist. For instance, Kyla admitted, "I go home and I'm so stressed . . . I will not be very happy teaching. (Interview II, 2/5/13). Similarly, Carol shared, "It dampens your spirit" (1795) because "those that I've tried to save, I'm not saving them" (2180). These day-to-day interactions with students weighed heavily on each teacher's willingness to persist. Carol made her career intentions available during our first interview by stating:

I just don't know sometimes. Some days I'm beginning to say to myself, 'It's time to go.' When you feel like you're not as effective, you begin to worry. I've been feeling that a little this year. I love what I'm doing . . . I don't mind trying it, it's good, but when you work so hard to put it together and the kids are not learning from it, it's very difficult. It's very discouraging. And the discipline at this point . . . it's the 'don't care' . . . I think I'm too old to worry about it (Interview I, 1/31/13)

Construction of a youth depravity model allowed both Kyla and Carol to persist, albeit temporarily, by highlighting students' inability, inattentiveness, and undisciplined actions. However, their claims are not entirely without merit. Graduation and student retention rates are monitored and scrutinized by state and local school boards. And in an effort to raise graduation rates, students are "socially promoted" to decrease retention rates despite persistent gaps in achievement. The result is students lacking requisite skills are passed on to the next grade level with little promise of gaining the skills they failed to

master during the previous year. Unfortunately, this contributes to students' and teachers' disaffiliation with school, reproduction of persistent achievement gaps, as well as higher than normal student dropout rates.

Summary: Positioning oneself as a “good teacher” and the significance of a youth depravity model. Carol and Kyla had spent decades as educators and shared many stories of past and current students. The narratives they provided were laden with frustrations they attributed to deficiencies among their students, which caused them to call their own persistence into question. In their current placement, it was understandable that each valued student compliance because neither taught a tested grade level and were not subjected to the same scrutiny of test scores as Donnasue, who taught eighth grade science in the same school. Consequently, maintaining their day-to-day persistence meant reproducing the status quo by “taming,” “training,” and reinforcing student compliance.

However, as they described their current experiences as science teachers, both Kyla and Carol faced the prospect that they were not going to be able to “train” their current group of students and be recognized and celebrated as the teachers they have been in the past. In response, their persistence was constructed and reinforced through stories that contributed to a youth depravity model—*it’s not my fault, it’s the kids’ fault*—to survive, even temporarily in their school.

Carol and Kyla discussed how their experiences with students impacted their willingness to persist. Therefore, it is appropriate at this point to turn attention to others who constructed, even modified their willingness to persist based on the ways they

authored themselves within and against the institutional practices and meanings that distinguished “good teachers” in their schools. In the following section I address Research Question 3a: *What do teachers’ stories tell us about their willingness to persist?*

Teachers’ Experiences and Their Willingness to Persist

So what are we to take from the stories science teachers tell of their experience teaching in hard-to-staff schools? How do the stories teachers tell about their experiences influence their willingness to persist? To answer these questions, I draw further attention to the ways teachers author themselves within and against the practices/meanings that distinguish “good teachers” to examine their willingness to persist.

Below, I provide some of the more impactful quotes from science teachers as they reflected on their experience upon arriving to their placement schools. These quotes also represent potential barriers to individual’s desires to persist in hard-to-staff schools.

I didn’t want to go to school because I hated it. (Lydia, 742)

Teachers didn’t seem happy. It was not a happy place to go. I just don’t want to be here today. (Teena, 771)

[B]ecause it’s crappy . . . that’s just not how a school is supposed to run. (Lori, 3446)

I was being strictly monitored and I was unhappy. (Anne, 2776)

I don’t think I could sustain my work . . . dealing with the working conditions and the stress of this type of school. (Phyllis, 439)

Everyone’s unhappy more days than not, people are complaining. (Meegan, 4566)

If I go home and I am so stressed . . . I will not be very happy teaching. (Kyla, 2342)

Not surprisingly, these quotes are representative of what is already known about hard-to-staff schools—working conditions found within these schools are poor.

Likewise, as participants reflected upon their initial experience as science teachers, they were initially frustrated, unhappy, and disappointed that teaching wasn't what they had thought it would be, which led me to wonder not *if* they would decide to leave, but *when*.

However, each of the participants attended school regularly and performed themselves to the best of their ability. As they did so they gained a more sophisticated understanding of the structures that guided their practice and their understanding of themselves as “good teachers.” All of the participants completed their teaching assignments and to date, all but one of the participants remains in education. Lori, Carol and Kyla are still persisting daily in the research sites. Interestingly, all have remained teaching in hard-to-staff or Title I in urban or rural locations. They had not become statistics—they had survived.

As my interviews with participants drew to a close, I asked all some probing questions that caused participants to reflect on their journey. For example I asked questions like: *What is it like for you to do that work? What does it mean to you? Would you or have you considered changing the placement of your work?* Their responses, some of which are listed below, would have been unexpected as they began their journey, but after they allowed me to tag along, I expected nothing less.

Oh my gosh, I love it! I don't think I would want to be any other teacher. (Lydia, 3117)

I'm not going to quit . . . I like my job. (Lori, 3539)

I will do this for the rest of my life . . . working in low-income communities . . . I still want to work with those ‘at-risk’ students [to] try to change their trajectories as much as I can with whatever tools I have available. (Teena, 2730)

I feel like I’m better [teacher] than I ever have been . . . when they’re [students] engaged and active . . . and they say they enjoy your class and they learn something in class that day. (Anne, 3169)

I see myself in education. I’m not 100 percent sure I would stay teaching here, but that has nothing to do with the low-income aspect. [In fact], I wanna stick to that. I definitely see myself sticking to a [low] socioeconomic community and sticking in education . . . the passion I feel for this movement of changing education in America . . . A 100 percent I’ll still be in it in five years. (Donnasue, 5037)

As this becomes more personal, I want to stay here . . . they [students] just want to be loved and I like being the person that could still love them. (Meegan, 5047)

And finally,

Yesterday, I was actually telling my mom, ‘I have no reason to leave this school.’ I like the kids I work with, I like the people I work with . . . I have no reason to leave the school. If I could take this school somewhere else, I would work there. It’s like a huge night and day because I couldn’t stand walking in that building last year, and now it’s like, Oh, I don’t mind! (Lydia, 3156)

CHAPTER VII

STORIES FROM THE FIELD: DISCUSSION AND IMPLICATIONS

Prologue

A year prior to collecting data for this study, I distinctly remember a cold walk into Teena's school thinking, "I have never seen this kind of instruction here. I wonder how it will go?" Teena, then in her second semester, invited me to help facilitate a Socratic Seminar with her Honors Biology class. She gave her students 5 minutes to skim through the article provided them the day before and prepare questions, statements, and points of interest prior to discussion. While the name of the article escapes me, its subject explored the controversial use of genetic engineering as a biomedical technology to reverse extinction of species or treat human genetic diseases.

Teena and I developed a healthy professional relationship when she first arrived at her placement resulting in coaching conversations that eventually led to strategies to promote student discourse. Her professional goal for this semester was to assume the role of facilitator to allow her students to become more authoritative by engaging in discussion. As a result, I suggested Socratic Seminar as a possible teaching strategy and provided ongoing support to help Teena authentically engage her students in meaningful science discourse. Per my suggestion, Teena showed her students videos of other high school students engaging in Socratic Seminar, she allowed them to choose from a

selection of articles that they would discuss, and she taught several lessons in Biotechnology that would help them understand their selected reading.

I joined Teena and her class of 21 students and proceeded to take my seat in the large circle. Teena read a few of the half-dozen question probes we scripted ahead of time to provoke conversation. However, students were understandably apprehensive to engage in discussion—after all, they rarely if ever had a chance to hold the floor by engaging in legitimate science dialog alongside their teachers. Nevertheless, they eventually cast aside their apprehension to engage in a vibrant and enthusiastic conversation that went places neither of us expected.

One boy, having spent most of the class silent, began to talk about the accessibility of genetic engineering as an issue that should be considered. He spoke from his own experience having spent his whole life in a rural North Carolina. His premise was simple: if biotechnology cannot be made available to all, it should not be considered as an option to treat genetic disease because then it will be another instrument to marginalize those less fortunate. He provided an analogy to substantiate his claim. He argued that in his school AP courses were not an option, yet his application for college was being compared to other high school graduates who had opportunities to take and earn AP credit, leaving him disadvantaged. He argued further stating the school system he attended failed to provide equal opportunities as other more affluent districts, citing many long-term substitutes and new teachers he associated with the high rates of teacher turnover. His closing argument was based on his own experiences with inequity. He did not approve of another instrument, like genetic engineering, be put in place that would

arguably privilege a few and marginalize others and cautioned others to carefully consider biotechnology as an option to treat disease. Teena and I simply stared at each other, smiled, and felt chills overtake us. To this day, each time we speak we reminisce over the lesson and the ways it transformed each of our lives. Our only regret, we did not record the lesson.

I tell this story to illustrate the relationship I maintained with Teena, the journey she willingly shared with me, and the co-construction of many narratives resulting from my relationship with the participants. Ironically and by virtue of the lesson described above involving a discussion on extinction, biomedical treatments, and economics, that a student's perspective of the inequities found in education were revealed. However, his perspective may have remained forever hidden if it not for Teena's willingness to explore less widely circulated teaching practices. Furthermore, by doing so she also discovered a fulfillment in teaching that she failed to enjoy previously. And finally, this experience that I shared with Teena and her students profoundly influenced the purpose and motivation to conduct this study.

Teena's journey as a science teacher was inextricably woven into the experiences her student shared in class. Her intense frustration arose from inequities and narrow structures that marginalized many and benefitted few. In the figured world of low-performing schools, teachers who were able to produce test scores and maintain student compliance with few resources in a constantly changing environment were lauded; while those who did not were publically scrutinized and sanctioned through action plans. Consequently, each group was marginalized based upon a superficial set of success

criteria, leaving many, arguably, incapable of achieving success or producing a sense of efficacy.

The inequities Teena aligned herself with contributed to an “unhappy environment,” causing her to question whether her own persistence was likely, or worth the effort. Mediators of her identity of a successful science teacher came by way of accumulating good test scores and writing few disciplinary referrals. However, Teena saw a different purpose for her teaching and authored a teaching identity that challenged the narrowly constructed meanings of “good teacher.” For instance, she sought not to merely get her students to pass state mandated testing, rather she authored meanings about what counted as “good teaching” that transcended high-stakes tests or student compliance. She wanted students to feel like successful learners not because the test told them so, but because they were prepared to hold the floor, make meanings of science, and eventually become confident students after high school.

Teena’s desire to “push past compliance” (755) and challenge the notion that “standardized testing is the end all be all” (968) resulted in a more fulfilling experience and contributed to her willingness to continue a career in education. In fact, after completing her two-year commitment to Teach for America she remained in education continuing as an instructional coach for other new teachers in her district.

Teena’s story was just one that exemplified the work of many brave science teachers working in hard to staff schools who initially began their teaching career with performances that aligned themselves with the institutional structures that defined “good teachers” to avoid scrutiny and control. However, according to their narratives, the

likelihood of persistence was dismal. Over time, teachers found ways to author themselves against the institutional meanings of “good teachers” in outwardly subversive ways, like Meegan or Lori, or in subtly subversive ways like Lydia, Anne and Phyllis. By privileging the voices of teachers who describe how they experience working conditions, a better understanding and contextualized view of the day-to-day experiences of teachers in hard-to-staff schools is generated in order “to put a human face on the information teacher educators give to prospective teachers” (Leonard & Dantley, 2005, p. 100).

In the remaining sections I will present the overall findings emerging from this study and situate the analysis of these findings within existing research on science learning and multicultural education. Following presentation of the findings, I will then discuss the implications to teacher education and future research on teacher retention.

Findings

Four findings emerged from the study of science teachers working in hard-to-staff schools that are significant in how teachers construct persistence. First, findings suggest that ‘working conditions’ as reasons for attrition are far more complicated than previously isolated measures of school level characteristics give credit. Rather ‘working conditions’ are fashioned in a complex fabric woven from school level conditions such as facilities, administrative support, student performance and demographics into an intricate tapestry of institutional meanings and structures that guide, but do not completely dictate, the performance of teachers. Second, findings revealed that teacher agency was a contributing factor promoting teacher persistence and emerged as teachers authored

themselves within and/or against the existing structures and meanings of “good teacher” through improvisations. Third, teachers constructed persistence by seeking networks of support to engage in critical reflection of their own teaching and the experiences of their students. Finally, critical reflection and personal agency were useful to close the distance between teacher’s personal visions of teaching and the expectations imposed upon them as teachers in hard-to-staff schools.

For instance, when teachers felt as though they performed active and meaningful roles in their schools—altering the curriculum, implementing “Thankful Thursdays,” or securing contemporary books for student to take home, they were more excited about their work. When teachers were able to engage in critical reflection and felt supported by colleagues or other instructional supports—by forming relationships with like-minded colleagues and instructional coaches, they felt more supported and confident to teach in ways that were uncommon in their schools. Finally, when teachers were able to enact teaching practices that approached those that inspired their desires to teach – deviating from the shallow, vocabulary-centered curriculum to teach students literacy skills and promoting the relevance of science topics through discussion, their narratives became less pessimistic about the conditions they faced and more agentic for the promise of changing the experiences of their students. Further, these findings also inform our understanding of how institutional meanings of “good teacher” are constructed from extant structures of surveillance, scrutiny, and control potentially contributing to teachers surrendering to the status quo found in their placements. And finally, these findings reveal conditions that support the emergence of innovative improvisations and how these improvisations

contribute to teacher persistence. Together, these findings suggest reforms to teacher education that extend support for beginning teachers into the first few years of teaching. Doing so may reinforce beginning teacher's sense of agency and shorten the latency period between entrance to the field and the emergence of meaningful improvisations needed to close the gap between an individual's personal visions of science teaching and the expectations of teacher performance in hard-to-staff schools, thereby promoting teacher willingness to persist.

In the following sections I summarize the findings from each research question, grounding my conclusions in the theoretical framework used to make sense of teacher narratives. Then, I will discuss the contributions of these new meanings to our understanding of teacher retention followed by recommendations to science teacher education reform.

What Motivates Individuals to Teach in Hard-to-Staff Schools?

Addressing RQ#1: *What are the stories teachers tell about their decisions to teach in low-performing, rural schools?* I found that teachers are drawn to pursue careers in hard-to-staff schools for a myriad of reasons. Findings uncovered several themes from teacher narratives for constructing a desire to teach in hard to staff schools. First, science teachers described their desire to teach in hard-to-staff schools to promote *social justice*. This theme was characterized by an aspiration to disrupt the educational inequities that they experienced directly or vicariously in their work with children of poverty. Similarly, participants spoke of the affordances they had associated with a sound education, which promoted their desire to *give back* to students experiencing less-fortunate circumstances.

The desire to teach was also inspired by a *status* that they, or others, attributed to teaching and finally, teachers described *affective* reasons for pursuing careers in education; specifically citing the emotional satisfaction they associated with helping others.

I interpreted an individual's motivation to teach in hard-to-staff schools to represent their personal visions of themselves as teachers that served as a resource to author themselves as science teachers. However, based upon the conditions they faced upon entering their respective schools, teacher's narratives demonstrated a stark contrast between their personal visions of 'teacher' and the socially and culturally constructed meanings of "good teacher" in their assigned schools. In the next section I summarize teachers' narratives describing the conditions they came to know in their schools adding texture to our understanding of 'working conditions.'

What Did Teachers Find When They Arrived?

Teachers often cite poor 'working conditions' as reasons for leaving a particular teaching assignment or the profession altogether. However, due in part, to survey methodology that is often employed to study teacher retention, little is understood about how the meanings of poor 'working conditions' are constructed or how they contribute to teacher attrition. A more in-depth examination of teachers' working conditions was the goal of RQ#2: *How do science teachers in low-performing, rural schools story their realities and how do these realities influence their teaching?*

Analyzing teacher narratives through Holland et al.'s (1998) theoretical framework permitted a cultural study of persons in practice to reveal how teacher identities are co-produced amidst the "discourses, embodiments, and imagined worlds"

(p. vii) giving rise to meanings produced during sociocultural activity. Further, analysis through this framework brought to light how the meanings of working conditions were engineered and/or modified by the participants. For instance, certain practices were valued over others, and among the most valued artifacts of “good teaching” were test scores and compliance. Although not all teachers were subjected to the import of test scores due to their teaching assignments, all teachers were aware of their value and the surveillance associated with them. Similarly, all teachers, regardless of their assignment, were subject to compliance as a practice used to distinguish “good teachers.”

Figured worlds are mediated by artifacts of human activity (Holland et al., 1998). For instance, the artifacts described in Teena’s statement: “If your students were producing results, then you were doing the right thing in those 90 minutes. If they weren’t, you must be doing the wrong thing” (Interview I, 12/6/12) both exemplified how test scores represented a gold standard in recognizing “good teachers” and also how frequently administered benchmark assessments represented artifacts distinguishing “good teaching.” Similarly, the artifacts of compliance impacted all teachers and manifest in narratives like Teena’s who stated: “If you have a quiet classroom, you have a successful classroom” (Interview III, 5/21/13). Displaying classroom artifacts like data walls, agendas, teaching objectives or lesson plans, allowed teachers to be recognized as “good.” However, as early career teachers gained a more sophisticated understanding of their surroundings, they read the artifacts associated with test scores and compliance as superficial and contested them more often.

Changing expectations and a shortage of instructional and human supports actually operated as barriers for individuals to achieve their personal visions of “good teacher.” As if the goal of producing test scores was not difficult enough for early career science teachers, having to do so with few instructional resources or human support proved even more challenging. Further, maintaining compliance was made more difficult when expectations to which teachers and students were held were subject to continual change.

The practices of test scores and compliance were monitored, scrutinized and controlled by significant actors such as colleagues, administrators and district officials and characterized as “micromanaging criticism” (Teena, 2150) or a “gotcha game” (Phyllis, 472). Additionally, lack of support led to surveillance and scrutiny as evidenced in Lydia’s initial response to teaching in were often couched in a lack of support the lack of support she received from her principal as unsupportive by stating, “I knew they needed to change, but she [principal] could never really give me any concrete examples on how to change them” (Lydia, 937). Furthermore, teachers were often reprimanded for non-compliant behavior as Lydia’s narrative suggested, “If you tried it [a reform-oriented teaching practice] once . . . that would be the day she [principal] comes into your room, everything [may] look chaotic, but it's going good . . . that would get shot down” (2206). Narratives such as these add depth to our understanding of the ways surveillance, scrutiny and control associated with test scores and student compliance contribute to teacher’s poor working conditions while also illuminating reasons why early career teachers often

abandon reform-oriented pedagogies further distancing themselves from their personal visions of teaching.

In summary, teacher working conditions and their meanings were predicated on test scores, compliance, lack of material and human support, and changing expectations. Test scores and compliance were monitored, scrutinized and controlled by district administrators, building level administrators and colleagues through frequent observations, regular interrogation and occasionally action plans for those teachers teaching tested subject areas. Surprisingly, student behavior was only discussed in isolation as a barrier to recognize oneself as a “good teacher.”

What Did Science Teachers Do to Promote Persistence?

Addressing RQ#3: *In what ways do science teachers author themselves within and against the realities they describe as significant?* participants described the cultural aspects of their placement to be jarring. I attributed their responses to the distance between their personal visions of teaching and the expectations placed upon them in their working environments. Attaining their personal visions of teaching was challenging due to the ways “good teachers” were recognized, scrutinized or controlled. However, daily persistence required teachers to draw upon their histories, accumulate scant resources and artifacts distinguishing “good teaching,” and author themselves through acts of improvisation to critically reflect about a world they shared with their students and their place in it. In their improvisations, teachers authored themselves both within and against the practices that gave rise to the meanings of “good teacher” and are interesting because they represent persistence as an ongoing endeavor.

Holland and her colleagues (1998) describe spaces of authoring as attitudes, actions, and discourses that result in the construction of self to align with, or in opposition to cultural positioning forces. Science teachers constructed identities in three distinct ways: (a) they authored themselves within the dominant discourses available to distinguish “good teachers”; (b) they authored themselves against dominant discourses; or (c) they ‘evolved’ in a “sort of Darwinian shift” (Smagorinsky, Wright, Augustine, O’Donnell-Allen, & Konopak, 2007, p. 89) from authoring themselves within existing structures and meanings while gaining an appreciation for the conditions in which they worked, then authored acts of improvisation to broaden the institutional meanings of “good teachers.” I found the latter to be most interesting being as it demonstrates a response that is overlooked by previous research on teacher retention.

Many first year early career teachers authored themselves within dominant discourses by complying with institutional meanings of “good teacher.” For instance, electing not to “stick that bull’s eye on my head” (Lydia, 1261), or asking, “Who are we to tell the administration what they should do?” (Anne, 2120) were representative statements of individuals authoring within existing cultural practices. Moreover, some participants explicitly described themselves as ‘humble sponges’ through statements such as, “the new teacher is supposed to be the humble teacher” (Anne, 2121) or “be a humble sponge” (Anne, 1602), which meant individuals were aware of the discrepancies between their visions of teaching and the social and cultural meanings of “good teachers” in their placements and they elected to comply.

Other early career teachers decided immediately that teaching in ways they saw their colleagues teaching was not gratifying or helping them achieve their initial visions of teaching, electing instead to contest against institutional structures used to distinguish “good teachers.” For example, Meegan cast aside the feedback she received from her administrators who distinguished her as a “good teacher” based on superficial criteria. Similarly, Teena cast aside recognition for being a good teacher for simply achieving “good” test scores, which she felt represented the minimum of students’ ability. Similarly, Lori repeatedly shrugged off the notion that “good teaching” meant keeping students quiet and seated during instruction. In response, participants constructed spaces to author themselves in opposition to the cultural positioning forces that defined “good teachers.” For instance Meegan’s improvised activity led her to seek out additional instructional supports effectively challenging the claims of her administrators that she was a “good teacher.” Her statement, “I do not have the training or education that I should in order to be like the *crème de la crème*” (Meegan, 3276) was in direct opposition to the positioning forces that identified her as a “good teacher.” Similarly, Teena stated, “I wanted to push past compliance because compliance was not that valuable. We want kids to be urgent and passionate and have fun and be joyful when they learn” (755). Both Teena and Meegan read the practices and meanings that gave rise to the narrow meanings of “good teaching” as artificial and elected to author themselves in ways that broadened these cultural meanings. These dispositions were subtly subversive of the kinds of teaching that was promoted in their schools, serving to bridge the gap between the teachers they intended to be, proving useful resources for their persistence.

Interestingly, not all participants authoring themselves within existing cultural practices did so indefinitely. Instead, some improvised their orientation toward these practices, justifiably contesting them by authoring themselves against the meanings of “good teaching.” In doing so, they broadened the narrow meanings of “good teacher.” These performances were notable because as Watson (2008) notes, “individuals work ‘with the grain’ of existing dominant discourses and subjectivities, as they do this, they can exploit the variety of sometimes overlapping, sometimes conflicting, discourses and subjectivities in order to craft a self which is, to an extent, ‘their own’” (p. 125). Working ‘within the grain’ of dominant discourses that defined “good teachers” narrowly proved to be an effective way to at least temporarily navigate the structures of surveillance, scrutiny and control, but doing so also led to narratives that suggested persistence was not likely. For instance, Phyllis stated, “I don’t think I could sustain my work . . . dealing with the working conditions and the stress of this type of school (Phyllis, 439).

Other narratives demonstrated more subversive improvisations. For instance Lori acknowledged “good teaching” in her school by stating, “what is a good teacher in my school, is sitting and writing in silence—that is good. If you can make your kids do that you’re good—you’re awesome” (752). However, a product of her authoring led her to subversive teaching practices; and although she availed herself to additional surveillance and scrutiny, her confidence was expressed in her statement, “If I have kids on the floor tracing bodies, everyone freaks out and decides to come watch . . . I don’t care—they can have that” (Lori, 715).

Similarly, Meegan declared her intent to ‘partner’ with her kids despite criticism from her colleagues. Her initial position gave rise to subversive behaviors such as shelving the Chemistry curriculum by stating, “it’s actually okay if you spend 20 minutes talking about like something to do with confidence; because God forbid you don’t get your standard done, you know what I mean?” (3737). Meegan broadened the meanings of “good teacher” by acting in ways to “push your students to love themselves or care about themselves or the aspects of things that make us who we are” (3704) goals that are not contained in the Chemistry curriculum. Broadening the meanings of “good teacher” by authoring herself against institutional structures meant being subversive, but it also resulted in increased satisfaction with her work. Meegan realized it was more important to “create good people and . . . the academics will come. If they’re feeling confident and they’re feeling like successful people, it’s gonna be shown in their work that they do” (3757).

Likewise, Phyllis, Lydia, and Lori, cast aside rigid pacing guides and instruction that allowed students to do little more than memorize science vocabulary by making science more relevant to their students through active discourse. For instance Lydia described her broadened view of “good teaching” by stating, “when students make connections” (Lydia, 1893). Similarly, Anne described the products of authoring herself against by expanding the meanings of “good teaching” by declaring, “when they’re [students] engaged and active . . . and they say they enjoy your class and they learn something in class that day” (Anne, 3169). Likewise, Phyllis’s attitudes and actions to suspend the district mandated instructional pace to develop deeper meanings for her

students expanded the meanings of “good teacher.” For instance she described, “if it is something that’s gonna relate to them . . . something that they can see in the real world or I can make connections . . . I’m gonna do an extra lesson” (Phyllis, 2384). The products of Phyllis’s agency were stimulated by an ability to read the superficiality of institutional practices and meanings used to distinguish “good teachers.” Finally, Teena authored herself against the rigidity of pacing guides used to dictate content and duration of instruction by stating, “the way I went about teaching and delivering the content itself making it more relatable. Things that kids would talk about” (Teena, 1164).

In summary, teachers’ willingness to persist was inextricably tied to their ability to author themselves within and against the institutional discourses that defined “good teaching.” The degree to which they authored themselves against the institutional structures influenced their narratives in ways that suggested they would persist in hard-to-staff schools. In other words, as teachers became more subversive of the systems that relegated them as “good teachers,” the more likely their narratives suggested happiness in their work, which contributed to narratives suggesting their willingness to persist. For instance, teachers who identified themselves as ‘humble sponges’ indicated through their stories that persistence was not likely, while those who authored themselves against the institutional discourses that defined “good teaching” described their futures in education with more permanency.

Discussion

Teacher persistence is a hard-won, daily endeavor that is influenced by more than student demographics and teacher characteristics. Schools serving socioeconomically

disadvantaged and ethnically diverse students experience greater than average teacher turnover rates translating into more inexperienced teachers staffing classrooms.

Ostensibly, inexperienced teachers are generally less effective which in turn, contributes to a persistent achievement gap found among ethnically diverse students. Culturally relevant pedagogy, which uses the experiences, language, and cultural resources that students bring to the classroom as conduits for learning has been proposed as one possible solution. However, since quite classrooms were artifacts of “good teachers,” opportunities to learn about the experiences of students through discourse were rare. In addition, compliance with prescribed instructional practices and local pacing guides distinguished “good teachers,” early career teachers had little leeway in modifying content of instruction based upon the experiences of their students.

Neito (2000, 2003) notes that the learning that takes place in teacher education programs greatly influence the attitudes and practices carried by early career teachers into the classroom. She encourages teacher educators to challenge prospective teachers to “face and accept their own identities, become learners of their students’ realities, develop strong and meaningful relationships with their students, become multilingual and multicultural, learn to challenge racism and other biases, and develop a community of critical friends” (Nieto, 2000, pp. 184–185). In short, she recommends prospective teachers build community through acts that promote connectedness with students and other faculty members. However, early career teachers often abandon the teaching practices promoted during their teacher preparation in favor of more common forms of

teaching in their schools (Grossman & Thompson, 2008; Pardo, 2006; van Hover & Yeager, 2004).

Similarly, Gloria Ladson-Billings (2000) calls for comprehensive, integrated, and systemic changes to improve individuals to teach culturally diverse students. She recommends prospective teachers explore one's view of their world and their place in it, extended field experiences that immerse prospective teachers in culturally diverse settings, and "[learn] to see students with strengths as opposed to seeing them solely as having needs" (p. 209)—a notion that is in direct opposition to those veteran teachers who constructed a youth depravity model. Furthermore, Ladson-Billings recommends studying the practices of expert teachers of African American students who deftly demonstrate their cultural competence by legitimizing home language and culture in the content they teach while engaging in sociopolitical critique.

In her book *Culturally Responsive Teaching: Theory, Research, and Practice* (2000), Geneva Gay makes a case for improving the academic success of ethnically diverse students through the implementation of culturally responsive teaching defined as teaching "using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching" (Gay, 2002, p. 106). As a result, the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters (Gay, 2002).

Easier said than done. Although the above recommendations are theoretically and practically grounded based upon research substantiated by classroom observations of highly effective teachers of culturally diverse learners, simply implementing these

practices proved especially challenging for science teachers in low-performing, rural schools. For instance, Teena surmised of her school's leadership, "an inability to change and adopt new doctrines or philosophies. I didn't really see the leadership within the district trying to read new literature on working in low-income communities . . . forcing themselves to be uncomfortable . . . everything seemed archaic . . . contributing to this cycle of non-achievement" (Interview II, 2/16/13). Similarly, Phyllis recalled questioning, "maybe we should be focusing on these research based instructional strategies" (Interview II, 12/14/12).

Despite the intuitions of the participants, institutional forces in play limited their ability to enact reform-oriented pedagogies. For instance, recall the ways quiet and orderly classrooms, preservation of instructional pace, and test scores served to construct a "good teacher" identity. Consequently, efforts to learning about students' realities, taking time to get to know students, and viewing students as having strengths instead of deficits were initially thwarted by institutional forces that guided teacher's practice. Furthermore, early career teachers reported being "surprised" by the way teachers spoke to children, often yelling and remaining uninvolved with their personal lives or interests. Recall the explicit advice given to Teena by a colleague: "Don't tell those kids anything about you" (Interview, I, 12/6/12), or metaphors circulating of teachers being "captain of the ship" or "king of the castle" shaped the interactions early career teachers initially had students, both limiting the relationships they were able to culture and the feelings of success they were able to experience.

Implications for Teacher Education

Merely teaching prospective teachers to be subversive of the institutional meanings of “good teachers” would be catastrophic. Rather, it would be more helpful to unpack the ways teachers authored themselves against cultural models of “good teacher” by situating their improvisations in the existing literature on science learning as well as the literature on teaching students from non-dominant subgroups.

In the following sections I will provide a brief description of one line of research on science teaching and learning to provide a rationale for why hard-to-staff schools operate the way that they do. In addition, I will employ the recommendations of researchers of multicultural education to make sense of the improvisations participants displayed and the impact on their teaching and willingness to persist.

Science learning as science literacy. In this section I examine the various ways science learning has been conceptualized and studied and use the underpinnings of research on science teaching to analyze the experiences of science teachers in hard-to-staff schools to situate their circumstances and improvisations in the literature.

The term science literacy has gained recent popularity over the past twenty years recently receiving prominence in national curriculum documents such as the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) and Next Generation Science Standards Lead States (2013). Yet, despite its popularity, there is no consensus regarding the definition of science literacy among members of the science education community (Roberts, 2007). Rather, Roberts (2007) presents a case for identifying two competing

Visions to be considered as science/scientific literacy. At one extreme, Vision I recognizes canonical conventional science which includes the products and the process of science itself, which has made an indelible mark on national science curriculum documents such as the *Benchmarks for Science Literacy* (American Association for the Advancement of Science [AAAS], 1993). On the other hand, Vision II represents contextualized situations that contain science components and favors experiences that students themselves are likely to encounter as consumers.

The stories teachers told about rigid pacing guides, frequent benchmark assessments, remediation for struggling students, and mandated classroom performances, suggested that the construction of their school experiences was heavily influenced by an application of science literacy consistent with Vision I. Canonical knowledge in the form of vocabulary and memorization were promoted by frequent measures of recall on benchmark tests and when students failed to comply or score appropriately on assessments, teachers were subject to scrutiny.

While expectations of teaching consistent with Vision I were described by many teachers as they began their careers in their placement schools, subtle shifts in what they deemed important began to emerge as they gained more experience and a more sophisticated understanding of the game. For instance, Phyllis, Lydia and Teena described taking more time to teach the relevance and application of science to the lives of their students, which resulted in greater satisfaction in their jobs. On the other hand, Carol and Kyla, the most experienced of the participants, clung to the importance of vocabulary and recall as indicators of student performance. Recall the statement, “I [had]

given them three days to do ten vocabulary [terms] . . . we had to set the tone, we had to train them . . . [but] they're not retaining it" (Carol, Interview I, 1/31/13). Facing dismal results produced by students' inability or unwillingness to complete rote and repetitive vocabulary tasks combined with their unwillingness to improvise instruction to promote applications of science, both senior teachers authored a youth depravity model to explain away their students' shortcomings and preserve their identities as "good teachers."

Research on science teaching. Science learning has been characterized as developing science literacies, which are defined as "science-related knowledge, practices, and values that we hope students will acquire as they learn science" (Anderson, 2007, p. 5). In an attempt to sift through research on science learning and discern the voices and perspectives of researchers whose intent is to improve science learning, Anderson identifies three distinct lines of research (conceptual change, sociocultural, and critical) based upon conceptual and theoretical frameworks utilized to examine science learning. In the following sections I describe each tradition and their implications on teachers who teach science in hard-to-staff schools

Conceptual change perspective. Developing scientific literacies through conceptual change became prominent in the 1980s; and since that time pervades several curriculum documents (e.g., AAAS, 1993; National Research Council, 1996) that shape science teaching nationally (Anderson, 2007). Science learning in this tradition focuses on the historical and philosophical nature of science promoting science through the use of model-based reasoning; conceptualizing learners as rational, yet inexperienced thinkers; utilizing methods to analyze students' conceptions; and devising a plan of action to create

conceptual conflict to correct students' understanding. The strength of this line of research draws from its ability to design conceptual and methodological tools to change students' conceptions of scientific phenomena and an ability to design empirical trials to test the effectiveness of these models. It also operates on the assumption that since other students can be expected to have similar misconceptions, the potential scalability of instructional models through the distribution of interventions is appealing. However, although conceptual change teaching has been shown to improve learning, it shows little evidence for closing achievement gaps found among non-dominant student subgroups.

In my interpretation, the conceptual change model best characterizes the kinds of teaching and learning promoted in the research sites. Model based reasoning was reinforced through the mandated use of graphic organizers and methods to analyze student's conception manifest in instructional practices like "do-nows," diagnostic pretests, benchmark assessments and activities such as "tickets out the door." Furthermore, recall Teena's statement describing her vision science teaching in her statement, "Science is envisioned as if you get 80 percent of your students to pass the test, they know science" (Teena, 2688). However, for those students falling short of the mark, the rigidity of district pacing guides prevented teachers from devising and executing instructional plans to create conceptual conflict to correct student's misunderstanding. Instead, students were sentenced to remediation where the instructional practices resembled those found in traditional classrooms. Consequently, teacher narratives related to their willingness to persist while delivering instruction

consistent with a conceptual change perspective suggested that persistence was questionable.

Sociocultural perspectives. Developing scientific literacies have been researched via sociocultural perspectives conceptualizing learning as an individual's ability to participate in a discourse community (Anderson, 2007). Similar to conceptual change traditionalists, sociocultural theorists examine the discourses students develop as a part of their experience as compared to discourses upheld by the scientific community. For example, investigating problems, conducting research and communicating findings are staples of the scientific community and this is an aspiration of emerging students of science. However, this is where the similarities end. Sociocultural traditions focus more on the culture and language of science communities, the cultural and intellectual contexts that shape their reasoning, and an analysis of the language and its meanings used in particular communities. Therefore, rather than correcting misconceptions, examination of science learning by researchers using a sociocultural tradition acknowledge multiple and often competing discourses that are available in the science classroom and attempt to bridge those differences by merging everyday Discourses and traditional scientific Discourses.

This particular line of research has conceptualized science learning as control of and appropriation of discourses. Consequently, researchers in this tradition remain attuned to the learners' culture, language and practices, thus, suggesting teaching practices that help learners master the language and culturally embedded practices of their context while also paying mind to the ways teachers and students can communicate

effectively across linguistic and cultural differences. This line of research acknowledges which language, values, and cultural norms are privileged in science and which students are advantaged or marginalized as a result. Accordingly, research emerging from sociocultural perspectives on engagement and student motivation shows considerable promise in rooting unmotivated behaviors or dissonance created by cultural differences. However, it bears noting that this style of research on science learning has not achieved the prominence of conceptual change research, which is due, in part, to the challenges of collecting quantitative data on sociocultural instructional methods, difficulty in developing prescriptive instructional practices, and a general unfamiliarity of traditionally prepared science teachers in the cultural and anthropological underpinnings of sociocultural research.

Thus, promoting science learning from a sociocultural perspective does not dovetail with the practices and meanings of “good teaching” found in hard-to-staff schools. For instance, if silent and compliant students are artifacts of “good teachers,” promoting science learning adhering to a sociocultural perspective does not mesh. Those teachers who authored themselves against the familiar conceptual change ideology that circulated in their schools, often authored positions consistent with sociocultural perspectives on science learning. For instance, acts that privileged group work, movement, social activity and opportunities for students to hold the floor during Socratic Seminar and similar classroom discussions were improvisations that characterized teaching and learning consistent with sociocultural perspectives. However, teachers who

embraced a sociocultural perspective on student learning also reported more meaningful relationships with their students, which produced greater satisfaction in their work.

Critical perspectives. Researchers examining science learning from a critical perspective view scientific literacy as a means of empowerment (Anderson, 2007) and focus specifically on the ways conceptual and cultural conflict are reinforced through unequal distribution of power. Central to their research agenda is exposing the ways that scientific ‘truths’ have been manipulated to advantage particular social classes while marginalizing others. This line of research conceptualizes science learning as an ability to see and criticize how power works to the benefit of some and at the expense of others.

Critical research allows us to acknowledge that the achievement gap exists because it benefits those whose interests it serves while allowing us to call into question the role of educators in perpetuating social injustice and inequity. While critical perspectives on science learning have not gained the recognition of conceptual change research, its strength rests in its ability to question the intent of educational policy, instructional practices, and how science achievement is measured. Consequently, operating from a critical perspective one would acknowledge that school science is doing exactly what it was intended to do – allow access to the power of scientific reasoning to a small elite group, while the “remaining students are fed a thin gruel of ‘facts’ presented in ways that reinforce the correctness of their inferior position in society” (Anderson, 2007, p. 25).

For instance, Phyllis exemplified a critical perspective to broaden the cultural meanings of “good teacher” by authoring herself against them in her statement:

I'm more trying to get the kids to be better readers . . . I'm gonna focus on different things rather than drilling them with the facts of what does it mean to be a malleable metal you know because at the end of the day, they're gonna forget that next year. (Interview II, 12/14/12)

Likewise, Donnasue objected to ways pretest scores reinforced her student's inferior position. For example, her students had historically been victimized by assessments and repeatedly performed poorly; after all, they knew they attended a low-performing school because EOC/G performance goals plastered the hallways. In addition, students and teachers were required to sacrifice instructional time to take a test that they were expected to fail. Recall Donnasue's statement:

[It] is very inhibiting . . . that we do this pretest and all the kids fail it . . . They're almost supposed to fail it because I didn't teach any of it yet, it's a pretest. So, in the first place that just seems a little bit dumb to me to have waste an entire week, that's another thing, it takes up an entire week to send all your kids in to take a test they don't know any of the answers, they take it and they come to me and they go, 'Miss [Surname] I think I failed that, I didn't know any of that' . . . even though I explained to them, 'no it's okay, it's a pretest you weren't really supposed to know any of it' . . . I still think it's a bad practice to have kids just taking tests of things they don't know anything about. (Interview I, 1/16/13)

However, unlike Phyllis, Donnasue elected not to act on behalf of her students by calling additional attention to the unintentional consequences administering pretests. In her estimation, the point had been brought to the principal by more senior faculty members and she felt that, "I think I would be met with a lot of resistance" (Interview I, 1/16/13).

Lori's critical perspective allowed her to expose the ways power and status of school and district administrators benefitted some and penalized others. Recall, for example, Lori's summary of her student's perspective:

I think they feel like it's like a jail some of them. They feel like they're trapped . . . they don't associate school as being a good place to be . . . a lot of them are being taught in classrooms to question, too—they're being taught to do these things and then if they do that, they're going to get suspended. They're just supposed to shut up all the time . . . What are we telling them? (Interview II, 12/14/12)

For Lori and her students, those who remained quiet and compliant avoided sanctions imposed by those holding positions of power.

Teachers who authored themselves within the cultural meanings of “good teacher” often spoke of their experience in negative ways. For instance, “I just don't want to be here today . . . it just wasn't a culture of we're all going to be happy” (Teena, 772), “my administration, anything I tried, really, they weren't happy with” (Lydia, 2716), or “it was like I have got to figure out what I need to do to be happy because I'm not happy and I know I don't see myself happy doing what it is I'm doing right now” (Meegan, 228). However, acts of improvisation that I characterize as reform-oriented, emerged from participants like Meegan, who intended to ‘partner’ with students or Lori, allowing her students to speak and move freely, resulted in narratives that were far more promising to their willingness to persist.

In summary conceptual change researchers recognize the historical basis of scientific truths, which is dependent on the data made available to them and the work of their predecessors. Sociocultural researchers view scientific truth as culturally situated, which is dependent upon the ways people of differing cultures generate standards for truth and develop forms of argument. Finally, critical researchers situate truth as an instrument of power, which is arranged by dominant classes to maintain their position as

dominant while perpetuating the marginalization of non-dominant classes. And while an analysis of these various teaching traditions are worthy of exploration in regards to students learning, I argue they are equally powerful in promoting teacher persistence because as teachers enacted agency to broaden the narrow cultural meanings of “good teacher,” their narratives suggested a greater willingness to persist.

Extending teacher preparation: What does the research say about coaching?

According to Jim Knight, author of *Coaching: Approaches and perspectives* (2009), “The quickest answer to this question is not enough” (p. 192). Citing ample research on the topic, Knight contends that many of the studies are preliminary and fail to meet the standards of rigorous research. Further, research on Professional Learning has not been as prominent as other forms of educational research as many forms of coaching are still being refined through “experimentation, implementation, reflection and revision” (Cornett & Knight, 2009, p 19).

One major challenge any discussion of coaching research faces is the multiplicity of ways in which the term has been used. In truth, to say that “research shows that coaching works” is a bit like saying “research shows that teaching works.” (Cornett & Knight, 2009, p. 193)

However, there is a growing body of evidence that suggests that coaching is associated with positive attributes. In a review of the literature on Cognitive Coaching, Edwards (2008) identified nine outcomes; those most related to my study are increased test scores, growth in teacher efficacy (Alseike, 1997; Hull, Edwards, Rogers, & Swords, 1998; Krpan, 1997; Smith 1997), and an increase in teacher satisfaction with career and position developed through reflective practice and collaboration (Edwards, Green, Lyons,

Rogers, & Swords, 1998). In addition, early career teachers attribute more positive teaching experiences when engaged in coaching (Mackie, 1998) which substantially influences teachers' ability to self-monitor and self-modify their teaching behaviors (Rich, 2013). Nevertheless, instructional coaching, or Cognitive Coaching as defined by Costa and Garmston (2002), requires more rigorous examination to describe their effects.

The challenges faced by teachers in hard-to-staff schools are immense and numerous. This research has demonstrated that persistence is doubtful for teachers who portray themselves as 'humble sponges,' electing to author themselves within the cultural model of "good teacher" in low-performing, rural schools. Conversely, teachers described their experiences with more joy, satisfaction and purpose when their narratives became more agentic or even subversive. Additionally, this research revealed the significance of human supports in supporting teacher's ability to achieve their personal visions of "good teacher." Together, these conclusions suggest that a teacher's willingness to persist is associated with their ability to improvise in ways that brings their teaching practices closer to their personal visions of "good teacher."

Culturally relevant pedagogy has shown great promise in narrowing the achievement gap in education (Ladson-Billings; 2000, Gay, 2000; Delpit, 1988). Teacher education programs committed to preparing prospective teachers to work with diverse students from high-poverty communities take into account issues of culture and context (Cole & Griffin, 1987; Delpit, 1988) and accentuate support in the belief that all students can succeed (Zeichner, 1996). I bring these points to light because early career teachers initially characterized their personal visions of "good teacher" in line with context,

culture and hope. However, these personal visions alone are not enough to promote teacher persistence because in-service teacher's attempts to achieve these visions are thwarted by the surveillance, scrutiny and control that contributes to the cultural model of "good teacher" found in hard-to-staff schools.

What can be done to develop early career teachers' resiliency when facing pressures associated with teaching in hard-to-staff schools? Teacher narratives suggest that persistence is linked to feelings of self-efficacy strengthened by their sense of agency combined with opportunities for critical reflection. Agency and self-efficacy are particularly problematic for teachers in low-performing rural schools because they are not endemic and contribute to rates of attrition. In my experience, teachers who succumb to attrition do so before they have acquired a sophisticated understanding of the school culture, effectively depriving themselves of opportunities to challenge the institutional structures that work to define their practice.

Initial research on the impact of coaching shows particular promise in addressing the barriers to achieving one's personal vision of "good teacher." Ideally, university affiliated instructional coaches can bridge an apparent discrepancy that exists between the ideals promoted during pre-service preparation and the cultural models of "good teacher" found in hard-to-staff schools. Doing so potentially reduces the lag time between entrance into teaching and the meaningful improvisations that have been shown to contribute to personal and professional satisfaction. In addition, instructional coaches provide needed instructional support, mentoring, and professional development that extend into the early stages of teacher's careers, ostensibly closing the apparent human

resource gap that is common to low-performing, rural schools. And finally, coaches who are knowledgeable of the institutional structures associated with curriculum and testing can provide early career teachers with a better sense of the structures that contribute to the cultural model of “good teachers,” which aids in the production of meaningful improvisations, narrowing that gap between one’s personal vision of “good teacher” and existing cultural models of “good teacher.”

Rethinking teacher persistence. Previous research on teacher retention has failed to consider the day-to-day persistence, construction of meanings and alternative meanings, and small-scale victories teachers accumulate through their moment-to-moment participation teaching in hard-to-staff schools. Employing a theoretical framework of figured worlds, this research acknowledged the social and cultural production of persons in practice and examined individual’s participation in figured worlds to reveal individuals’ agency in the meanings they constructed, the social and cultural influence of their surroundings, and the agency they enacted to author themselves in ways that served to reinforce their daily persistence as science teachers in low-performing, rural schools.

Sustaining compliant students and producing test scores on high-stakes assessments mediate participation in the figured world of teaching science in low-performing, rural schools. Consequently, teaching practices and identities are validated by way of these institutional structures, which are made available to teachers via scrutiny, surveillance and control. Additionally, teachers, especially early career teachers are left to navigate these structures largely on their own and under highly dynamic conditions.

Diverging from previous research on teacher retention, I ask not why teachers failed to take up these predefined roles, rather I ask how they were positioned by significant actors (administrators, colleagues, and students), how they understood (made meanings), and contested/aligned themselves (agency) with these positions. Examining teacher persistence as a yearly occurrence disregards the struggles, frustrations and hard-won victories established by teachers who wish to sustain the reasons they entered the profession in the first place. This present research contributes to an ongoing understanding of teacher persistence and makes recommendations to teacher educators to upset this unfortunate reality.

I became drawn to this particular study through countless hours of providing instructional coaching to science teachers working in low-performing schools. Having witnessed the disparities between teachers employed in large rural school districts and those working in small rural school districts, I was compelled to tell the stories of those working in the latter. Despite lacking of resources, support, and leadership, science teachers negotiated persistence daily, which I found intriguing considering little prior research existing on the topic. Such a fine-grained analysis of persistence from teachers' stories suggested promising results if utilized to better understand teacher retention and I learned that teacher persistence is an ongoing process that happens week-to-week, day-to-day, and moment-to-moment. After all, how do you eat an elephant?—One bite at a time.

If we are to learn more about teacher turnover and the factors that contribute to it, we must pay closer attention to the ways teacher turnover, or persistence are constructed.

Rather than paying attention to the teachers who leave, we must pay closer attention to the teachers who remain yearly, monthly, or make it to the end of the day in schools that have concentrated many of the factors known to produce teacher turnover. To this end, analysis of the ways individuals' lives intersect with institutional structures to produce persistence or attrition can pay dividends by informing purposeful design of interventions to offset the frighteningly historic high rates of turnover in hard-to-staff schools. After all, where is it most likely that newly-prepared teachers will enter the field?—In a hard to staff school.

Teacher persistence is a daily activity. Deciding whether or not going to work each day or whether their work was worth the effort represented daily dilemmas faced by teachers in hard to staff schools. However, as individuals gained a more sophisticated understanding of the institutional structures and identified ways to contest it, they managed to author themselves as teachers that better aligned to the values they described as influential to choosing a career in education. The transition from initial shock, disappointment, and helplessness that eventually gave way to hope, success, and self-worth through an exertion of personal and collective agency represented identities in practice—a dynamic process of ongoing identity formation and re-formation guided by one's history and available resources in socially and culturally bound spaces. Certainly, it was interesting to be a part of and I learned of the potential value as teachers found cracks, albeit minute, to infiltrate and exert energy for change. My experience with them demonstrated that these productions took time and a more sophisticated understanding of the system, yet they are nevertheless possible.

Closing Remarks

If teachers matter, additional support must be provided to ensure their endurance. The legacies that plague hard-to-staff schools are insensitive to legislation or change in policy therefore, we need the teachers who enter these schools to contribute to the changes they are capable of making. But that takes time and too often early career teachers succumb to the forces that drive teachers away from a particular school before they acquire understanding enough of the system to improvise change. This study revealed just cause for extending instructional support to early career teachers entering the field by pairing them with instructional coaches or content coaches to help navigate the turbulent waters and find niches where they can feel successful. This study also revealed the benefit of privileging the voices of teachers in hard to staff schools to learn more of the experiences that contribute to teacher persistence. Specifically, these studies can delve further into the interaction between teacher and coach to reveal the ways coaching influences one's willingness to persist. If we are to improve early career teacher's likelihood of persistence, their stories are a commodity.

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APPENDIX A

INTERVIEW PROTOCOL

Interview one: Life History

Describe your background and experiences as a learner. What were your experiences as a learner?

What do you think contributed to you to becoming a science teacher?

Describe how you have come to arrive at your current placement as a science teacher in a low-performing, rural high school.

Is there anything specific about your life history that specifically drew you or prepared you for your work in a low performing school (for example, previous work with underprivileged students, a movie or book about teaching in these types of schools, your learning experiences were in similar schools)?

Is there anything in particular that you had to “get used to” working in your current placement?

Can you provide specific examples?

Interview two: Day-to-day operations of teaching science in low performing school.

What is it like to do what you do?

(For example: Describe a typical day.)

What is most rewarding about your work?

What/who are the sources of these rewards?

Can you provide a specific example?

What is least rewarding (or most frustrating) about your work?

What/who are the sources of this frustration?

Can you provide a specific example?

Describe what an ideal day of teaching might look like.

Describe some of the daily pressures you feel as a science teacher in a low-performing school?

What/who are the sources of these pressures?

How do these pressures become available to you? (explicit, implicit, perceived?)

Are there specific ways in which you challenge/conform these pressures?

What are the conditions you have come to experience as a science teacher in a low-performing school?

Are there specific ways on which you challenge/conform these pressures?

Interview Three: Intersection of teacher's identity and school structures.

What does it mean to be a science teacher in a low performing school working with students who carry a label such as (performing below grade level, disadvantaged, low SES)?

What is it like to for you to do that work?

What does it mean to you?

Would you or have you considered changing the placement of your work?

How do you think working in a different placement might change your perception of the work that you do?

APPENDIX B**INFORMED CONSENT****UNIVERSITY OF NORTH CAROLINA AT GREENSBORO****CONSENT TO ACT AS A HUMAN PARTICIPANT**

Project Title: Stories from the field: Teachers' accounts of teaching science in low-performing, rural schools.

Project Director: Patrick Conetta & Heidi Carlone

Participant's Name: _____

The purpose of this research project is to bring to light the everyday lived experiences of high school and middle school science teachers working in low-performing, rural schools to identify perceived constraints and affordances to providing equitable science instruction to high school students. Therefore, the purpose of this qualitative study is to elicit stories from practicing science teachers working under said conditions to identify patterns within their experiences.

The findings of the study would help us better understand the otherwise taken for granted experiences of science teachers working in low performing and under-resourced schools to determine how such conditions contribute to the type of science instruction typified in their classrooms. With this understanding, teacher development programs can make informed decisions to better prepare teachers to enter such environments and persist within the conditions that reside there. The hope then is to work toward reducing the rate of turnover seen among new teachers who enter these schools.

You have been asked to participate because you are currently or recently were a high school or middle school science teacher working in a low-performing, rural school. If you choose to participate in this study, you will be asked to participate in an interview process that reveals your experiences as a teacher and the conditions that contribute to or constrain your ability to deliver equitable science instruction while attending to the diverse needs of your students.

During your interview(s), you will be audiotaped and/or videotaped. The data collected will not be reported to your principal or anyone in your school district. Furthermore, all of the participants will have the opportunity to check the researcher's interpretations and analysis of the findings in their final form.

This study poses minimal risk to participants. There might be a concern of confidentiality in this study. In order to address this concern, pseudonyms will be used when writing about findings or in any presentation.

If you have any concerns about your rights, how you are being treated or if you have questions, want more information or have suggestions, please contact Eric Allen in the Office of Research Compliance at UNCG at (336) 256-1482. Questions or concerns the benefits/risks associated with being in this study can be answered by Patrick Conetta (pjconett@uncg.edu or 336-684-6149).

While there are no direct benefits to participants in this study, the findings of the study would help us better understand the conditions science teachers face when working in low-performing, rural schools. As a result, stakeholders at all levels will be able to make the best usage of initial training and ongoing support for science teachers in an effort to reduce teacher attrition. There are no costs to you or payments made for participating in this study.

All information obtained in this study is strictly confidential unless disclosure is required by law. All consent forms and written data will be kept in a locked cabinet. All electronic data will be kept on password-protected computers.

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data, which has been collected be destroyed unless it is in an unidentifiable state.

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

By signing this consent form you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing to consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate.

Signature: _____ Date: _____